Healthcare Challenges in the Changing Scenario: An Innovative Approach

Smitha Nayak
and
K.V.M.Varambally
Manipal University, Manipal, India

Key Words
Healthcare, Human Capital, economic consequences, India

Abstract
Today, technology has revolutionised our lives. It has paved way to globalization and has resulted into increase in sharing of ideas, efficient allocation of resources, mobility of factors and access to better goods and services. However, it has been pointed out that the benefits of globalization, has not penetrated down to the lower segment of the population. Moreover, it has also resulted into higher incidence of disease, environmental degradation and also quality of human capital of a nation. As quality of human capital is an important factor determining economic growth, it has become an issue of predominant importance across nations. In India, to enhance the quality of human capital, interventions have been designed, at national and state levels, to make ‘healthcare’ affordable, acceptable and accessible across the strata of population. However, healthcare system in India is confronted by many challenges that deplete the effectiveness of the interventions implemented by the Government. The objective of this paper is to highlight the challenges confronting the healthcare system in India. This paper also highlights the innovative approach of Kasturba Hospital, Manipal, in making healthcare affordable and accessible to the lower segment of the population.

Introduction
Today technology has brought in a paradigm shift in our lives. It has paved way to globalization and has resulted into increase in sharing of ideas, culture, efficient production process and innovative technological breakthroughs. Even though globalization has resulted into serious benefits, critics have always questioned it. The primary grounds on which globalization has been criticised is that the benefits of globalization has failed to show colours on the lower sections of society. It has also brought in challenges like environmental degradation, disease incidence and its impact on life expectancy, quality of productive labour etc. The severity of these consequences is extremely high as all the factors contribute to effective utilization of resources thereby impairing economic growth of a nation. Nations across the globe have taken cognisance of this and have displayed their commitment by adopting the Millennium Development Goals (MDG) that was formulated at the Millennium Summit of the United Nations in September, 2000. MDGs were formulated with an objective to reducing poverty and enhancing the status of healthcare of the lower section of society, across nations.

Population Health: an Economic Engine
From time immemorial, health has always been considered as an important asset. The Millennium Poll report prepared by the Secretary General of the United Nations concluded that ‘health’ was consistently ranked number one among the things that people desired in life. Research in the area of health economics has also reinforced that healthy population is a primary input to economic development. Fogel (1994, 2000) observed the decline in mortality over the past 200 years in Europe and tried to associate two dimensions, namely calorie intake and economic growth rate. He concluded that if adequate calories had been provided to the bottom fifth of the population, it would have contributed to 0.11%, annually, to the growth rate of UK between 1780 and 1980. Research evidence has also accumulated on the strong association between health related variables and economic growth. Barro (1997) opined that a 10% increase in life expectancy could raise the economic growth rate by 0.4%, yearly. Nordhaus WD (2002) opined that half of the overall economic growth in the United States, during the previous century, was...
due to improvements in population health. Murphy et al (2003) in his report titled ‘Diminishing Returns? The Cost and Benefits of Improving Health’, calculated the monetary worth of reducing mortality caused due to cancer and heart diseases. He opined that a 10% reduction in deaths due to heart disease was worth more than $3trillion. He also concluded that a 1% reduction in cancer mortality would worth $400 billion to the present and future generations.

Traditionally, health was viewed as an end product of the growth process. It was opined that economic growth would lead to higher spending on health. Wealth undoubtedly leads to health but health is also an important factor determining the quality of human capital which further determines economic development.

Economic consequences of Health

Health of the human capital of a nation plays a pivotal role in its economic development. Research in the area of health economics has repeatedly emphasised this view. In the words of AmartyaSen, ‘health, like education is one of the most basic capabilities that gives value to human life’. This holds good both at macro and micro levels. The various dimensions of economic consequences of health are narrated below:

- **Human Capital**: traditionally economic growth has been measured in terms of quantum of accumulation of physical capital. Since the 1990s, researchers have been trying to identify the determinants of economic growth. Lucas (1988) opined that skill, education and health of the human capital are the primary determinants of economic growth. He concluded that stock of human capital would continue to appreciate provided there is a continuous improvement in population’s heath status, education levels and they are exposed to better learning and training procedures. He stated that economic value of human capital is enhanced only if the quality of human capital is enhanced.

- **Preventive Health Programs and Economic development**: Health programs implemented by the Government have resulted into betterment of health conditions of the poorer sections of the society, thereby facilitating a balanced economic growth. A World Bank Report(1993) calculated the economic gain of implementing preventive healthcare programs by the state. It concluded that the near eradication of malaria between 1947 & 1977 had raised the national income by 9% in 1997. A cost benefit analysis revealed that malaria eradication program was implemented at a cost of $52million over the past 30 years but had resulted into a cumulative gain of $7.6 million national income. This clearly highlights that effective implementation of preventive health programs triggers a boost in the national income.

- **Health and Income**: Health is an important determinant of income, both at national and individual levels. It is observed that countries with a high prevalence of life threatening disease have poor economic prospects. Gallup et al(2001) opined that countries heavily burdened with malaria experienced an average growth rate of 0.4 percent between 1965 and 1990 as compared to an average growth rate of 2.3 percent in other countries. A World Health Organization(WHO) report (2005) titled ‘Preventing Chronic Disease – A Vital investment’ estimated that India had lost US $ 9 billion in income due to diseases like heart diseases, stroke and diabetes, which were necessarily preventive by nature. Abegunde et al (2006) opined that deaths due to preventable chronic disease would adversely impact labour supplies and savings which would further deplete the national income. The WHO report also revealed that an increased investment in chronic disease prevention would result into prevention of 36 million premature deaths over the next 10 years. These averted deaths would translate into substantial economic gain at a national level.

- **Health and Contribution to savings and investment**: Increase in longevity raises the length of retirement thereby necessitating an increased retirement fund. In order to facilitate sustained retirement income, individuals start saving higher during their productive age. Bloom et al(2003) investigated the impact of increased longevity on national savings rate. They opined that a ten years rise in life expectancy raised the savings rate by four percentage points. The same view is also shared by Lee et al(2000) in their study on the Taiwanese population. Bloom et al(2003) opined that East Asian countries had an average savings rate of 30 percent, which was a key to East Asia’s economic success.
Health, Income and Education: There exists a strong correlation between the health status of the population, education and income. Psacharopoulos et al (2004) opined that an increase in 1 year of education would result into increased wages by 10 percent. Healthier households would have more disposable income as they would incur lesser expenditure on health related issues. This would facilitate them to invest more in their children’s education and upbringing. The effect of health on education becomes a vicious cycle. Hence this triangulating effect of health, income and education would have its root embedded into the economic development of a nation.

Healthcare Scenario in Developed and Developing Countries

In developing countries, the greatest burden of disease is due to communicable diseases, malnutrition, unhygienic living conditions, and inaccessibility to health care systems. In developed countries the burden of disease is mainly from non-communicable disease such cardiovascular diseases, cancer and accidents. A report published by the Department of Chronic Disease and Health Promotion - World Health Organization in 2006 observed that 388 million people, worldwide, were expected to succumb to chronic non communicable diseases. Around 80% of these deaths would be in low and middle income countries and that too in the most productive age groups. Since health is a prerequisite for economic growth, it brings to light the necessity of investing in healthcare at the macro and micro levels. The report also states that most of the causes of deaths are preventable in nature. This further necessitates economies to implement preventive healthcare interventions so as to shape the country’s human capital into a productive one, thereby reducing the incidence of diseases. Thus preventive health care would be a vital investment for developing countries like India.

Table 1: Healthcare Indicators in select counties

<table>
<thead>
<tr>
<th></th>
<th>Public Expenditure on Health % of GDP</th>
<th>Private Expenditure on Health % of GDP</th>
<th>Health Index US $</th>
<th>Births attended by Skilled health personnel (%)</th>
<th>Loss due to inequality in life expectancy (%)</th>
<th>Life expectancy at Birth (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Human Development</td>
<td>Australia 6.5</td>
<td>3.1</td>
<td>0.976</td>
<td>100</td>
<td>4.7</td>
<td>80.4</td>
</tr>
<tr>
<td></td>
<td>United States 7.1</td>
<td>8.5</td>
<td>0.923</td>
<td>99</td>
<td>6.6</td>
<td>77.4</td>
</tr>
<tr>
<td></td>
<td>United Kingdom 6.9</td>
<td>1.1</td>
<td>0.949</td>
<td>99</td>
<td>4.8</td>
<td>78.5</td>
</tr>
<tr>
<td>Medium Human Development</td>
<td>China 1.9</td>
<td>2.9</td>
<td>0.843</td>
<td>97</td>
<td>13.5</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td>India 1.1</td>
<td>4.1</td>
<td>0.717</td>
<td>43</td>
<td>32.3</td>
<td>62.9</td>
</tr>
<tr>
<td></td>
<td>Pakistan 0.8</td>
<td>1.8</td>
<td>0.717</td>
<td>31</td>
<td>27.1</td>
<td>63.6</td>
</tr>
</tbody>
</table>


Table 1 displays health indicators for select developed and developing countries. India’s government spend on health care is 0.9% of its Gross Domestic Product (GDP) which in comparison to China is 1.8% of its GDP. The developed economies spend on an average 6-7% of their GDP on health care. This indicates that private expenditure plays an important role in keeping the health system intact in India. Private expenditure constitutes of out of pocket expenditure by individuals and insurance schemes. The level of health insurance penetration in India in only 11% which implies that most of the spending on health care is primarily done by individuals out of their disposable income. In India, the weight age given to preventive health spending is questionable as maximum health spending is done by individuals themselves. In developed countries, the government plays a significant role as a provider of quality health care with a concurrently lower share of private health care expenditure.

The Human Development report published by WHO, in 2007-08 indicates that China has given more importance to preventive programs like vaccinations etc. The report states that 86% of infants below
the age of 1 have been administered preventive medication for diseases like measles, polio etc. In India the figure reflects to be a mere 58%, which is unbelievably low. One factor that could have contributed to such low figures is the low level of adult literacy in India. In India the adult literacy stands at a dismal 61% in comparison to China that has an adult literacy rate of 90.9%. In the industrialized economies almost 100% of births have been attended by skilled medical personnel whereas in India the figure stands at 43%.

Inaccessibility and non-utilization of health services by women contributes to maternal mortality and is also a sensitive indicator of the prevailing health conditions of women in a country. It can be observed that maternal mortality is also an indicator of underutilization of preventive health services by women. Available statistics show that maternal mortality in developing economies is higher than that in developed economies. According to a study by UNICEF conducted in 2008 on Maternal & New Born Health, 536,000 women died in 2005 form causes related to pregnancy and child birth. It is reported that South Asian region alone contributed 35% of the maternal deaths accounting to 187,000 deaths alone in 2005.Apart from the south Asian countries, it was the West & Central African region that accounted for 30% of the maternal death worldwide in 2005. These alarming figures indicate the underutilization of preventive health services by women in developing economies.

Measures such as life expectancy at birth indicate the quality of human capital an economy holds. This measure of population health does not only depend on when transpires within the health care system - the array of hospitals, doctors and other health care professionals, the techniques they employ, and the institutions that govern access to and utilization of them. Such measures also depend on adoption of preventive behaviour at an individual level that affects an individual’s health such as diet, exercise, smoking, and compliance with medical protocols. The health care system could be performing exceptionally well in identifying and administering treatment for various diseases, but a country could still have poor measured health if preventive health care practices are unusually deleterious. On comparison of life expectancy at birth in developed and developing nations, it is clearly observed that developed nations have an average life expectancy at birth of 79 years where as the developing nations have an average life expectancy at birth of 65 years. Dax Bermudez (2011) said that an increase in the amount spent on healthcare per capita will result in an increase in life expectancy rate since higher expenditures, which equate to investments, in health care provide for higher availability and better quality of medical services which improves the overall health and length of individuals’ living in the country. Statistics given in table 2 also indicate that countries with higher healthcare spending, both private and public, had significantly higher life expectancy of their human capital. Maciosek et al(2010) opined that adoption of preventive health services, both at individual and macro level, by a nation would avert the loss of more than two million productive life-years annually. Hence policy makers should pursue options that move the nation toward greater use of proven preventive services.

Indian Healthcare System: an Overview

Today, India has witnessed significant advances in technology, education and research which has enabled her to be the focal point of discussion at various verticals. Much of the progress is strongly attributed to the development of human capital. On one hand population explosion in India is a critical issue that has to addressed and on the other it is viewed as a blessing in disguise. The young,educated employed proportion of the population is offering dividends to the country, especially at a time when the world is concerned about the ageing population profile. However, a disparity has been observed across social strata, across gender with reference to health, education and employment. This disparity needs to be addressed immediately, failing which the dividend may turn into a demographic liability. The objective of this paper is to highlight the challenges confronting the healthcare system in India. This paper also highlights the innovative approach of Kasturba Hospital, Manipal, in making healthcare affordable and accessible to the lower segment of the population.

- Inequity in Healthcare spending

A WHO report (2004) on Disease and Injury Country estimates opined that India accounts for 18% of the deaths and 20% of disability adjusted life years(DALYs). Although burden of chronic disease accounts to
53% of deaths only 36% of the deaths are caused due to communicable diseases, maternal and perinatal disorders and nutritional deficiencies. A UNICEF (2009) study concluded India accounted to a fifth of maternal deaths and a quarter of child deaths in the world. The statistics published by WHO in 2010 indicated that the mortality rate among children below 5 years is 69 per 1000 live births, which outnumbered the average of Southeast Asia of 63 per 1000 live births.

The statistics conceal the wide disparity existing in India. The National Family Health Survey (NFHS) 2006-2007 revealed that the infant mortality rate was 82 per 1000 live births among the poorer sections of the society and the same figure stood at 34 death per 1000 live births in the affluent class. There also exist disparities across geography in India. The NFHS also indicated that some states in India had better health indicators. Life expectancy at birth in Madhya Pradesh was 56 years, in contrast to 74 years in Kerala. This disparity can be mainly attributed to the social, political and economic circumstances prevailing in the state. One more reason that could have caused this disparity is the low priority given by the Government to social sectors, like health and education in particular, in terms of allocation of resources. India allocates only 1 percent of its Gross Domestic Product (GDP) to health, in comparison to developed countries like Australia and United States investing 6 percent on an average. A wide discrepancy is observed on the amount invested by individual states. Rao et al (2005) opined that states like Gujrat, Haryana spent only 3.5 percent of their budget on health whereas states like Rajasthan and Tamil Nadu spent an average of 5 percent of their budget on health in comparison to the national average of 4.97 percent. The study also concluded that the healthcare spending by states was declining over a period of time. They indicated that in 1985 – 86 all states spent 7.02 percent of health which has declined to 4.97 percent in 2003-2004.

- **Dependency on private spending on healthcare**

  India might be growing at a rate equitable to the other BRICS economies but the proportion of public expenditure on healthcare is far below comparison. A study undertaken up by the World Bank revealed that among the comparable BRICS nations, which have similar socio, political and economic influence in the globe, India spends the least on public healthcare. This study compared public healthcare spending between the period of 2004-2009 across BRICS, and it concluded that India spent the least among the nations. India, on an average spent one percent of 0.936 percent of its total expenditure on healthcare in comparison to the other nations in BRICS, who spent an average of 3 percent of their total expenses on healthcare. The difference is even more disheartening, these figures are analysed keeping the population growth rate in the back drop. Population over the same period, grew at a rate of 1.36 percent in India, where as the population growth rate is only 0.7 percent for BRICS group as a whole.

  As the public health expenditure is low, the nation as a whole largely depend on private expenditure to meet their healthcare expenses Rao et al(2005) opined that 72% of the healthcare expenses in India is funded by the private sector. Out of this 68% is funded by out of pocket expenses of the households. The results clearly indicate the strong dependence India has on out of pocket expenditure to look after the healthcare expenses. The study also concluded that government spending on healthcare amounted to only a meager 23.8%, and the rest was funded by NGOs and external funds.

<table>
<thead>
<tr>
<th>Health Spending</th>
<th>Private Households (68.8%)</th>
<th>Private Firms (3%)</th>
<th>Government Centre (7.2%)</th>
<th>State (14.4%)</th>
<th>Local (2.2%)</th>
<th>Public Firms (3%)</th>
<th>Banks (0.2%)</th>
<th>NGO (0.5%)</th>
<th>External Funds (2%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>71.8%</td>
<td>23.8%</td>
<td>3.2%</td>
<td>0.3%</td>
<td>2%</td>
<td>2%</td>
<td></td>
<td></td>
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</tbody>
</table>

*Source: Rao et al(2005)*

Even though ‘Health’ of human capital has been acknowledged as an integral factor determining growth of a nation, it does not rank high on the Indian priority list. The poor state of healthcare in India is the reflection of this. However, India’s National Commission for Macroeconomics and Health (NCMH –
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GOI 2005b) called for an increase in Government spending on health to about 2.5-3 per cent of GDP. Taking a step in this direction, the Planning Commission, under the Prime Minister’s office, has been directed to increase the funding for healthcare in the 12Five Year Plan on universal healthcare coverage initiatives like National Rural Health Mission (NRHM) etc.

### The Urban Rural Divide

In India’s 65 years of post-independence era, several developmental programs have been implemented, but still around 62% of the population continue to live in the rural areas. A considerable proportion of this population belong to below the poverty line, who have to strive consistently to conquer the battle of survival. Government of India has designed and implemented several interventions to improve the status of healthcare in the rural areas, but still there exists a urban – rural gap in healthcare care indicators. Challenges like malnutrition are still to be addressed totally in rural India and the rural public healthcare system in many regions are still unsatisfactory and poor households are held to ransom due to the private sector healthcare delivery dependence.

Table 3: Urban-Rural Gap in India

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Rural</th>
<th>Urban</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital Beds</td>
<td>0.2 / per 1000 population</td>
<td>3 / per 1000 population</td>
</tr>
<tr>
<td>Number of Doctors</td>
<td>0.6 / per 1000 population</td>
<td>3.4 / per 1000 population</td>
</tr>
<tr>
<td>Infant Mortality Rate (IMR)</td>
<td>74/1000 live births</td>
<td>44/1000 live births</td>
</tr>
<tr>
<td>Births attended by trained</td>
<td>33.5%</td>
<td>73.3%</td>
</tr>
<tr>
<td>health personnel</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: Jhilam Rudra De (2008)*

Table 3 provides an evidence for the existence of the rural – urban gap in the Indian healthcare system. Rural India has only access to 0.2 hospital beds per 1000 population in contrast to their urban counterparts who have an access of 3 beds per 1000 population. A similar contrasting nature is also reflected in the number of doctors available to the rural and urban population. A similar skewedness is observed on the health service utilization in both the regions. The IMR in rural India stood at 74 per 1000 live births and 44 per 1000 live births in urban India. These figures are contrasting and are far beyond the average IMR of the more developed nations. WHO report of(2001) concluded that the IMR in more developed nations is 9, which is far ahead of Indian figures.

### Poor access to primary and preventive health care services

A Government of India Report on Universal Health Coverage for India (2011) opined that one of the important factors hindering the improvement of health indicators in India is the fact that majority of the population have poor access to primary and preventive health care services. This is evidenced by the fact that India’s immunization rates and percentage of births attended by skilled health personnel rank among the worst in the world (Table 1).

Inadequate preventive healthcare services results in high incidence of deaths from communicable diseases. A WHO report on Global Burden of Diseases, published in 2008, revealed that of the total number of deaths in a sample of 192 countries across the world, India accounted for nearly one-fourth of the deaths due to diarrhea, more than a third of the deaths due to childhood cluster diseases (many of which are preventable by basic immunization), more than a third of the deaths due to Leprosy, more than half the deaths due to Japanese Encephalitis and about 30 percent of the deaths due to prenatal conditions. The burden of diseases is more prevalent in rural India than urban India. Park (2000) opined that majority of rural deaths, which are preventable, are due to infections and communicable, parasitic and respiratory diseases. Infectious diseases dominate the morbidity pattern in rural areas (40% rural: 23.5% urban). Waterborne infections, which account for about 80% of sickness in India, make every fourth person dying of such diseases in the world, an Indian. This statistics throws light of the extent access the
population has to primary healthcare services which further reflects on the utilization of preventive healthcare services.

- **Public Health Infrastructure**
  
  One of the prime factors that reflect on the Indian healthcare system is the availability of public health infrastructure. The differences across the rural and urban areas are quite striking with all the resources, trained manpower and even reasonable health infrastructure at its command in urban areas. A large population of the country continues to suffer due to the availability of public health infrastructure. The public health facilities are ailing due to their poor infrastructural setup and lack of manpower. According to the Census report 2011, there is a tenfold difference in availability of qualified doctors between rural and urban areas ie: one qualified doctor per 8,335 people in rural area vis-à-vis one doctor per 885 people in urban area. This vast gap in the healthcare system highlights the emergent need to address the scarcity, failing which the effectiveness of the Government interventions in the healthcare system can be questioned.

- **Health Insurance**
  
  Healthcare, in India, is financed predominantly by Private sources and the Government spending on healthcare accounts only to a meager 23.8 % (Table 2). Chollet et al (1997) opined that health care financing as a percentage of GDP is only 1 percent in comparison to other middle income countries who spent almost 3 % of GDP on healthcare. They opined that the current proportion of healthcare spending by the state is not sufficient as India ranked high on burden of disease. As a result majority of the Indian population resorted to out of pocket expenses to finance their healthcare needs. Gumber 1997, Visaria&Gumber 1994 opined that out of pocket expenses incurred by the poor in India lead them to a poverty trap as they are more susceptible to diseases. A study by the World Bank(2002) concluded that majority of the Indians fell into the poverty trap due to medical expenses incurred them on event of hospitalization. The report stated that 40 percent of the Indians who are hospitalized borrow money or sell their assets to coer the cost of healthcare and the Indian population, on hospitalization, spend more than half of their total annual expenditure on healthcare. The above scenario leads to inequity in health insurance coverage. Anita J opined that only 15% of India’s 1.1 billion people are covered through health insurance, and most of it is government employees. The poor quantize of population, who are the most needy of health insurance, are not covered by an health insurance package. This phenomenon occurs as they are not in a position to afford the expenses incurred in health insurance.

- **Managerial Lacuna in Government interventions**
  
  Since Independence, several measures have been initiated by the Central Government to improve the status of healthcare in the country. Prominent among these programs are : the programs launched by the Centre and State Governments aimed to control or eradicate communicable diseases, programs aimed to improve the environment sanitation and programs targeted to improve the health of the rural populace of the country. One such initiative that has been acknowledged worldwide is the National Rural Health Mission Program(NRHM). This program was launched with an objective of providing comprehensive primary healthcare service to the poor and the vulnerable population. It provides financial assistance to access primary healthcare service there by making the system affordable (JananiSurakshaYojana), it facilitates acceptability through the trained healthcare staff (Accredited Social Health Activist network) and it also enhances the availability of health infrastructure for heath delivery. Even though NRHM is conceptualised in a magnificent manner, it encounters several hurdles in the implementation phase, due to which the effectiveness of the initiative. Firstly, the cash transfer process to the beneficiary of the programs and the ASHA workers is not clearly drafted. Information about the exact quantum and the process for the payment of the money is by no means clear - both to the community, and even to some health care providers. This reduces the efficacy of the NRHM program and does not sufficiently incentivise the rural population to access primary healthcare services. The other factor that determines the success of the program is the availability of health care personnel. NandanDeoki (2008) opined that one of the major bottle necks in successful implementation of Government programs, in India, is lack of adequate number of healthcare personnel, specifically female, in the public health system. Thirdly, provision and
availability of required logistics is an important issue for success of any programme. It is observed that the public health system in India does not provide the required medicine, infrastructure and support at the required place at the required time. The absence of required infrastructure and medicines fails to enable the existing health personnel to deliver quality service.

**Accessibility of Healthcare to the Rural Segment: A Manipal Experiment**

As a social initiative Kasturba hospital along with Manipal foundation which is a philanthropic arm of Manipal University under the guidance of Dr. Ramadas Pai, Padma Bhushan awardee and chancellor of Manipal University introduced a non-insurance healthcare benefit card called ManipalArogya card which helped in providing quality health at an affordable cost to a large section of the society. As on 2012 ManipalArogya card is in its 11th year since inception. Through the decade of operations, the enrolments of Arogya Card have increased many fold.

Table 4: Enrolments of ManipalArogya Card

<table>
<thead>
<tr>
<th>Year</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total no. of cards issued</td>
<td>13451</td>
<td>18351</td>
<td>23163</td>
<td>25957</td>
<td>28645</td>
<td>32109</td>
<td>35008</td>
<td>41634</td>
<td>45298</td>
<td>51769</td>
<td>52614</td>
</tr>
</tbody>
</table>

This healthcare card has made quality healthcare affordable to poorer sections of the social strata, in southern parts of Karnataka state, India. The card holders can be avail benefits from seven hospitals that function under the Manipal Group.

In the year 2005-06, Manipal foundation of Manipal University along with G. Shankar family trust introduced ‘Manipalarogyasuraksha’ scheme which was a type of community insurance scheme. Unlike ManipalArogyascheme this scheme was insurance based model where in people used to get cashless or cash reimbursement for hospital services at a very low premium.

Arogya Card is offered at a nominal rate which has indeed become one of the critical success factors of the Manipalaroya card. The product for the individual is priced at Rs. 250 and for family it’s Rs. 500. The family had been defined as primary member, spouse and their children below the age of 21. The product has a unique feature called family 1 and family 2 by paying Rs. 100 and Rs. 200, one or both the parents respectively of the primary card holder is eligible to avail the discount. There is a provision for discount on the premium for renewal in subsequent years. This unique and low cost of the product has attracted from different parts of Karnataka, Kerala and Goa.

**Conclusion**

Health is a major determinant of economic development of a nation. In instrumental terms, a healthy human capital paves way for economic growth of the nation as it reduces production loss caused by illness in workers, increase adult productivity through improved nutrition and maximises the use of resources that were totally or partially unavailable due to illness and frees up resources that would otherwise have to be allotted for treating illness. Research in the area of Macroeconomics, undertaken using data of considerable number of countries, conclude on a strong association between health of human capital and economic growth. Hence, investment in health, at all verticals, is essential to facilitate balanced economic growth.

The pluralistic nature of the Indian healthcare sector, it becomes evident that concentrated efforts have to be made by the Government and the community for improving the quality of human capital in India. On the Policy front, Health policies, in India, have to be designed in such a manner that it encourages private players to collaborate with the Government in ensuring equitable distribution of health services to all. Public Private Participation (PPP) in healthcare would play an instrumental role in making healthcare affordable, accessible and acceptable to the underprivileged population.
Another area for consideration could be Health Financing, with specific reference to health promotion and disease prevention. Within the healthcare system, the Government should make provisions for managing and administration of the public healthcare system, for health programs, health insurance and other mechanisms of healthcare financing to as to facilitate access to healthcare by the underprivileged.

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