"Design Of Health Care Services"

By Prof. Poulose N.M. [a]

Abstract

Health research is the key to a well functioning and effective health sector in the country. Over the years, health research activity in the country has been very limited. Given the impetus provided to the health care industry as well as medical tourism by successive governments both central and state as well as industry, it is imperative to understand the preparedness of the investors and stakeholders, not only to gauge the utilization of investments made but also benefits derived out of such investments both short term and long term. Therefore a study on "Systematic Evaluation of Health Tourism in Karnataka State" was taken up. The study looks to indentify the medical tourism resources in the state of Karnataka and assess the potential, study the existing facilities available for medical tourists in the state of Karnataka, to review the plan and policies of the state of Karnataka in the context of present and future development of medical tourism in the state of Karnataka and to assess the existing problems stifling the development of medical tourism in the state of Karnataka with specific reference to infrastructure, human resources, tourist information and publicity, tourism awareness and allied aspects. An empirical study, descriptive and analytical in nature was undertaken to complete the study on "Systematic Evaluation of Health Tourism in Karnataka State". The universe for the study consists of key stake holders who provide health care products and services of varied nature. The data collected from both primary as well as secondary sources consisted of major hospitals, spas and resorts offering medical treatments in the state of Karnataka. The study among other things finds that there is a cost arbitrage that can be optimized for revenue in providing health care facility as there a number of foreigners who have exhibited confidence in the medical facility provided and are also content with the cost of service provided. It also finds that the medical tourism presents an untapped potential that can be significantly exploited by the nation as well as health care service providers.

Key words: Health Tourism, Design, Health care services, medical treatments

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1. India's Health System

India's health care system is characterized by a pattern of mixed ownership and with different systems of medicine - Allopathy, Ayurvedic, Unani, Siddha and Homoeopathy.The health sector in India is comprised of private sector that mostly provides curative services and government sector that provides publicly financed and managed promotive, preventive and curative health services. The private health sector consists of the 'not-for-profit' and the 'for-profit' health sectors. The not-for-profit health sector includes various health services provided by Non Government Organisations (NGO's), charitable institutions, missions, trusts, etc. Health care in the for-profit health sector consists of various types of practitioners and institutions. The private sector in India has a dominant presence in all the submarkets—medical education and training, medical technology and diagnostics, pharmaceutical manufacture and sale, hospital construction and ancillary services and, finally, the provisioning of medical care.

2. Public Health Sector

The public health sector consists of the central government, state government, municipal & local level bodies. Health is a state responsibility, however the central government does contribute in a substantial manner through grants and centrally sponsored health programs/ schemes. There are other ministries and departments of the government such as defence, railways, police, ports and mines who have their own health services institutions for their personnel. For the organized sector employee's (public & private) provision for health services is through the Employee's State Insurance Scheme (ESIS).

The National Health Policy envisages a three tier structure comprising the primary, secondary and tertiary health care facilities to bring health care services within the reach of the people. The primary tier is designed to have three types of health care institutions, namely, a Sub-Centre (SC) for a population of 3000-5000, a Primary Health Centre (PHC) for 20000 to 30000 people and a Community Health Centre (CHC) as referral centre for every four PHCs covering a population of 80,000 to 1.2 lakh. The district hospitals are to function as the secondary tier for the rural health care, and as the primary tier for the urban population. The tertiary health care was to be provided by health care institutions in urban areas which are well equipped with sophisticated diagnostic and investigative facilities. In pursuance of this policy, a vast network of health care institutions has been created, both in rural and urban areas. Increased availability and utilisation of health care services have resulted in a general improvement of the health status of our population, as is reflected in the increased life expectancy and marked decline in birth and mortality rates over the last fifty years. However, these achievements are uneven, with marked disparities across states and districts, and between urban and rural people. As on March, 2010, there were 147068 Sub Centres, 23673 Primary Health Centres and 4535 Community Health Centres functioning in the country in addition to 1579 District Hospitals/Sub-divisional Hospitals.

3. Structure of Ministry of Health and Family Welfare

The Ministry of Health and Family Welfare consist of the following four Departments:

• Department of Health and Family Welfare
• Department of AYUSH
• Department of Health Research
• Department of AIDS Control

While Department of Health and Family Welfare is responsible for implementation of national level programs for control of communicable and non- communicable diseases, hospitals and dispensaries and medical education, the department of AYUSH takes care of promotion of indigenous systems of medicine such as Ayurveda, Homeo, Unani, Siddha and ongoing research in indigenous medicine. The Department of Health Research is mainly concerned with research in medical and health activities. The Department of National AIDS Control Organisation (NACO) is responsible for the planning and implementation of programs for prevention and control of AIDS.

4. Thrust Areas of Department of Health and Family Welfare

The National Health Policy 2002 aims to achieve acceptable standards of good health amongst the general population of the country. In line with the policy framework, the National Rural Health Mission, the flagship program of Ministry of Health and Family Welfare was launched in 2005 to provide accessible, affordable and equitable health care services for people living in rural areas of the country with a focus on under-served population and marginalized groups. The Goal of the Mission is to improve the availability of and access to quality health care by people, especially for those residing in rural areas, the poor, women and children.

- The Mission adopts a synergistic approach by relating health to determinants of good health viz. Segments of nutrition, sanitation, hygiene and safe drinking water.
- The mission aims at mainstreaming the Indian systems of medicine to facilitate health care.

The Plan of Action includes increasing public expenditure on health, reducing regional imbalance in health infrastructure, pooling resources, integration of organizational structures, optimization of health manpower, decentralization and district management of health programmes, community participation and ownership of assets, induction of management and financial personnel into district health system, and operationalising community health centres into functional hospitals meeting Indian Public Health Standards in each Block of the Country.

5. **Monitoring against set standards:** Clear standards are defined for infrastructure and deployment of Human Resources to ensure provision of quality services at all levels through the Indian Public Health Standards (IPHS). With IPHS the minimum requirements at the facility level in terms of infrastructure and human resources has changed. Based on past experiences, the guidelines have been revised.

6.1. Communitisation:

a) **ASHA:** More than 8 lakh women have been trained (minimally in the first module) and deployed as ASHAs at the village level. More than 6.9 lakh ASHAs are provided with drug kits. The deployment of these Activists has opened the space for community participation and facilitation of services and increased utilization of public facilities. ASHAs have contributed significantly in promoting of JSY and institutional delivery, and the promotion of attendance on immunization day.

b) **Rogi Kalyan Samitis/ Hospital Development Societies:** Rogi Kalyan Samiti (Patient Welfare Committee) / Hospital Management Society is a simple yet an effective management structure. It is a registered society that acts as a group of trustees for their respective hospital. RKS grants, annual maintenance grants and untied funds are being given to each of these societies to empower them to undertake activities necessary to ensure smooth functioning of the facilities. RKSs decide about the procurement issues, rate fixation of the services and renovation plans. RKSs have also provided water filters, inverters and other such utilities to health facilities. In some States like Tamil Nadu and Kerala, RKS has also been actively involved in raising funds from local sources for the betterment of health facilities. Presently, there are 30818 RKSs functional in the country, of which 1198 RKSs were registered in the last one year.

c) **Village Health, Sanitation and Nutrition Committees (VHSNC):** It is an important tool of community empowerment at the grassroots level. The VHSNC reflects the aspirations of the local community, especially the poor households and children. This year the mandate of the pre-existing Village Health and Sanitation Committee was expanded and the component of nutrition was added. They were renamed as Village Health, Sanitation and Nutrition Committee. Untied grants of Rs. 10,000 are provided annually to VHSNC under NRHM, which are utilized through involvement of Panchayati Raj Representatives and other community members in many states. Presently, there are 4.95 lakh VHSNCs functional at the village level in the country.

d) **District level Monitoring and Vigilance Committee (DLVMC):** In this year, setting up of a District level Monitoring and Vigilance Committees was initiated as an additional mechanism of monitoring NRHM and its various dealings by including the Community and Panchayati Raj members. Guidelines for making such a committee and its functions were prepared and sent to States.

6.2. Human Resources augmentation: Nearly 1.5 lakh skilled Human Resources are added in the Public Health System in the last 6 years under NRHM. Of these, 41% are ANMs, 20% are staff nurses, and 14% are Medical Officers including Allopathic and AYUSH doctors. In the last one year (since June 2010), 1334 MBBS doctors, 2003 Specialists, 4892 staff nurses and 3079 AYUSH doctors were added in the system. 14711 ANMs were added and deployed at the sub-centres. As of June 2011, there were 61436 sub-centres with a second ANM.

6.3. Improved Programme Management: Programme Management is being improved by addition of managers and accountants at State, District, Block and also facility levels. Thus, presently all the states have a State level Programme Management Unit and 636 districts have established a full-fledged District Programme Management Units. Overall, more than 15000 personnel have been added in the capacity of programme managers, accounts managers and data managers at the State, District, Block and facility levels in the last 6 years.

6.4. Infrastructure Development: Through decentralized planning, the State undertakes new constructions of facilities to meet acute gaps in access to public health services under NRHM. Further, it also identifies facilities for upgradation and renovation at all levels. Thus, in the last 6 years (up to June 2011), 55 New Constructions and 238 projects of upgradation and renovation have been completed at the District level facilities; 252 New Constructions and 1238 projects of renovation and upgradation have been completed at the CHC level facilities; 1713 New Constructions and 4919 renovations and upgradation have been completed at the PHC level and 7802 New Constructions and 8853 projects of renovations and upgradations have been completed at the Sub-centres. Currently, 2510 facilities are operational as First Referral Units (FRU) in the country and 127 centres were made operational as FRUs in the last one year.

7. Health research

Health research is the key to a well functioning and effective health sector in the country. Major scientific breakthroughs hold the promise for more effective prevention, management and treatment for an array of critical health problems. "Over the years, health research activity in the country has been very limited. In the Government sector, such research has been confined to the research institutions under the Indian Council of Medical Research, and other institutions funded by the Central/ State Governments. Research in the private sector has assumed some significance only in the last decade. There must be efforts taken for integration of various systems of medicine, with emphasis on developing synergy between modern and AYUSH systems of medicine and offering choice of system of treatment to patients. Over a period of time, there is a need to work out a model of primary healthcare based on integration of different systems, incorporating various efficacious and synergistic remedies. These systemic changes would be part of the larger process of moving towards a system for universal access to healthcare, which provides space for medical pluralism and rational integration of systems.

8. Medical tourism – A study

Given the impetus provided to the health care industry as well as medical tourism by successive governments both central and state as well as industry, it is imperative to understand the preparedness of the investors and stakeholders, not only to gauge the utilization of investments made but also benefits derived out of such investments both short term and long term. Ascertaining the existing state of the industry will enable garnering an understanding of the state of the industry and its inherent potential to optimize the investments made. Therefore a study on "Systematic Evaluation of Health Tourism in Karnataka State" was taken up. The study facilitated an understanding of the state of preparedness and enabled leveraging the opportunities present and helps individuals and organisations optimize on the inherent potential of the industry.

The study looked to indentify the medical tourism resources in the state of Karnataka and assess the potential, study the existing facilities available for medical tourists in the state of Karnataka, to review the plan and policies of the state of Karnataka in the context of present and future development of medical tourism in the state of Karnataka and to assess the existing problems stifling the development of medical tourism in the state of Karnataka with specific reference to infrastructure, human resources, tourist information and publicity, tourism awareness and allied aspects. The study covered major hospitals, spas and resorts offering medical treatments in the state of Karnataka.

An empirical study, descriptive and analytical in nature was undertaken to complete the study on "Systematic Evaluation of Health Tourism in Karnataka State". The study required data for the study was collected from both primary as well as secondary sources. Primary data was collected from major hospitals, spas and resorts offering medical treatments in the state of Karnataka. Thus the universe for the study consists of key stake holders who provide health care products and services of varied nature. The secondary data was collected from journals, reports, published data from nodal agencies dealing with health care and tourism such as ministry of tourism, medical council of India and research reports in the domain of health tourism, books etc., was used. The data thus collected was compiled, classified, tabulated and analyzed using appropriate statistical tools. The study used a structured questionnaire which in-turn was validated through a pilot survey before being used as the tool of data collection.

The data gathered through the questionnaire was compiled, classified and arranged in an organised manner and then tabulated for data consolidation and interpretation. From the tabulated data calculation of averages using percentages and weighted mean scores were done to quantify the information gathered. The tool used for data collection was a structured questionnaire that relied on open as well as close ended questions to gather data. The analysis enabled the quantification of data and ascertainment of the Systematic Evaluation of Health Tourism in Karnataka State.

The paper looks into the impact of specific parameters that are related to medical tourism and attempts to collate the impact on the design of health care sector in the country.

- On the question of What kind of treatment do you undertake?, the study finds that there is a fair proportion of 74% of individuals who come for medical treatment and about 25% of the respondents come for surgery. Among these patients about 8% of them are foreigners. The chi-square test shows a high level of significance
- To determine the nature of treatment undertaken the respondents were asked of the kind of treatment undertaken with regard to surgery. The study again finds that major surgeries such as knee or hip replacement surgeries, kidney transplant etc are the type of treatment undertaken by Indian nationals as well as foreigners, the chi-squre test showing a high level of significance.
- The average spending more than 10,000 in more than 50% of the cases.
- The study finds that the right treatment has been given at the right cost in majority of the cases.

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Crosstab				
Count				
		4.Nationality		Total
		1. Indian	2. Foreigner	
What kind of treatment do you undertake	1. Medical	323	11	334
	2. Surgical	89	25	114
	3	1	0	1
	4	2	0	2
Total		415	36	451

Chi-Square Tests				
	Value	df	Asymp. Sig. (2-sided)	
Pearson Chi-Square	40.450	3	.000	
Likelihood Ratio	34.402	3	.000	
Linear-by-Linear Association	30.719	1	.000	
N of Valid Cases	451			

If Surgical * 4.Nationality				
Crosstab				
Count				
		4.Nationality		Total
		1. Indian	2. Foreigner	
If Surgical	1. Hip / knee Replacement	95	5	100
	2. Kidney transplant	10	2	12
	3. Cosmetic surgery	2	0	2
	4. Implants	11	0	11
	5. Eye Surgery	1	0	1
Total		119	7	126

Chi-Square Tests				
	Value	df	Asymp. Sig. (2-sided)	
Pearson Chi-Square	3.706	4	.447	
Likelihood Ratio	3.552	4	.470	
Linear-by-Linear Association	.150	1	.699	
N of Valid Cases	126			

How much do you spend approximately * 4.Nationality				
Crosstab				
Count				
		4.Nationality		Total
		1. Indian	2. Foreigner	
23. How much do you spend approximately	1. Rs. 1,000 – 10,000	109	0	109
	2. Rs. 10,001 – 1, 00,000	114	0	114
	3. Rs. 1, 00,001 & above	11	0	11
	4. $ 500 – 1000	1	0	1
	5. $ 1001 – 10000	2	3	5
	6. Above 10,000	1	2	3
	7. Yes	105	26	131
	8. No	72	3	75
	9. Others	2	3	5
Total		417	37	454

Chi-Square Tests				
	Value	df	Asymp. Sig. (2-sided)	
Pearson Chi-Square	96.161	8	.000	
Likelihood Ratio	83.410	8	.000	
Linear-by-Linear Association	33.217	1	.000	
N of Valid Cases	454			

Do you get the right treatment at the right time and cost even without an insurance * 4.Nationality				
Crosstab				
Count				
		4.Nationality		Total
		1. Indian	2. Foreigner	
Do you get the right treatment at the right time and cost even without an insurance	1. Yes	310	32	342
	2. No	81	3	84
	3	10	0	10
Total		401	35	436

Chi-Square Tests				
	Value	df	Asymp. Sig. (2-sided)	
Pearson Chi-Square	3.950	2	.139	
Likelihood Ratio	5.259	2	.072	
Linear-by-Linear Association	3.897	1	.048	
N of Valid Cases	436			

9. Significance of the findings and conclusions of the study

1. The findings of the study indicate the utilization of health care facility by not only Indian nationals but also foreign nationals indicating Karnataka is a significant location for attracting medical tourism.
2. There is a significant revenue and cost component involved in providing health care facility
3. There is a cost arbitrage that can be optimized for revenue in providing health care facility as there a number of foreigners who have exhibited confidence in the medical facility provided and are also content with the cost of service provided.
4. The medical tourism presents an untapped potential that can be significantly exploited by the nation as well as health care service providers.

10. Impact of the findings on the design of health care sector

As outlined earlier, the government of India has envisaged a health care system and structure that caters to the basic health care requirement of the country. The quality of service is still found wanting in many of the states. Karnataka as a state needs to not only seize the opportunity but also take advantage of the confidence reposed by the public in its health care system. This can be done by:

- Revamping all the three tiers of the health care system in place be it the Sub-Centre which cover a population of 3000-5000, the Primary Health Centre which cover a population of 20000 to 30000 people or the Community Health Centre which acts as referral centers for every four Primary Health Centers which cover a population of 80,000 to 1.2 lakh.
- Ensuring adequate trained personnel are available by creating an infrastructure and facility for training doctors and nurses and other para-medical staff.
- Creating a suitable medical infrastructure of quality that is amenable to high end medical treatment ensuring a fair distribution of services across the state.

The impetus given by the state will have a significant impact on the system and facilities available but also on the quantum and nature of medical services provided and consequent revenue and foreign exchange earnings by the state.

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