

# Belagavi Smart City Mission: A Prospective Growth for Medical Tourism in Karnataka

Vivekanand A. Mane

Associate Professor, Department of Commerce, Government First Grade College, Raibag-591 317  
Dist. Belagavi, Karnataka State, India

---

## ABSTRACT

A Smart City delivers public and civic services to citizen & businesses in an integrated and resource efficient way while enabling innovative collaborations to improve quality of life and grow the local and national economy (Accenture). Smart City is a recent, upcoming concept and booming international phenomenon. Smart city word originated back in 1998, but the first funding for smart city came in the year 2000. The six dimensions of a smart city are Smart Economy, Smart Mobility, Smart Environment, Smart People, Smart Living and Smart Governance. A smart city is a community that is efficient, sustainable & livable. The term smart city has become more and more popular in the field of urban planning. The implementations of the smart technologies can increase the value of the city. The city of Belgaum is nominated and selected for smart city mission of Govt. of India and located at the northern tip of Karnataka, and borders the adjoining states of Maharashtra and Goa. There is a proposal to make Belgaum the second capital of Karnataka, owing to its commercial and industrial importance within the state. Belgaum ranks second to Bangalore in terms of overall exports in Karnataka, which can largely be attributed to the region's flourishing automotive industry. Apart from this Belgaum district is a prospective for growth of medical tourism in Karnataka. Medical tourism is a new form of niche tourism increasingly becoming popular in the current world and India has emerged as a popular destination for providing Global standards of health care at affordable costs. Belgaum district has its good locations to receive medical treatments and considered a leader in promoting medical tourism. Healthcare, like food and shelter, is a basic need of Humanity. In addition to the allopathic system, Belgaum district has got a unique advantage in alternative therapies like ayurveda, yoga, and siddha too. Ghataprabha is the city famous for cancer treatment and other places of the district like Sogal, Gokak and Belagavi are the best in ayurveda treatment, due to its inherent environmental and cultural component. This paper is focused on the concept of Belgaum Smart city concept and how it will be a prospective growth for medical tourism in Karnataka.

*Keywords: Smart City, Medical Tourism, Low Costs, Ayurveda and Naturopathy.*

---

## INTRODUCTION

A smart city is a city that is well planned, and it provides the cost-efficient services, environmental efficiency, and technological sound services for the welfare of the citizens. Smart city word originated back in 1998, but the first funding for smart city came in the year 2000. The six dimensions of a smart city are Smart Economy, Smart Mobility, Smart Environment, Smart People, Smart Living and Smart Governance. A smart city is a community that is efficient, sustainable & livable. The term smart city has become more and more popular in the field of urban planning. The implementations of the smart technologies can increase the value of the city. The city of Belgaum is nominated and selected for smart city mission of Govt. of India and located at the northern tip of Karnataka, and borders the adjoining states of Maharashtra and Goa. There is a proposal to make Belgaum the second capital of Karnataka, owing to its commercial and industrial importance within the state. Belgaum ranks second to Bangalore in terms of overall exports in Karnataka, which can largely be attributed to the region's flourishing automotive industry. Belgaum is also recognized for its enormous contribution to sugarcane cultivation and production of sugar. The region is blessed with high contents of bauxite and uranium, which has led to the establishment of many automotive and metal casting industries close to the city. A special economic zone (SEZ) dedicated to aerospace engineering is soon being set up in Belgaum, as the city also serves as a major training center and cantonment base for the Indian Armed Forces. Apart from this Belgaum district is a prospective for growth of medical tourism in Karnataka. Medical tourism is a new form of niche tourism increasingly becoming popular in the current world and India has emerged as a popular destination for providing Global standards of health care at affordable costs. Belgaum

district have its good locations to receive medical treatments and considered a leader in promoting medical tourism. Healthcare, like food and shelter, is a basic need of Humanity. In addition to the allopathic system, Belgaum district has got a unique advantage in alternative therapies like ayurveda, yoga, and siddha too. Ghataprabha is the city famous for cancer treatment and other places of the district like Sogal, Gokak and Belagavi are the best in ayurveda treatment, due to its inherent environmental and cultural component.

### Objectives:

1. To analyse the major keys and dimensions for smart city concept.
2. To study the demographic and infrastructure profile of Belgaum Smart City.
3. To analyse the prospective growth of medical tourism in Belgaum district.

### RESEARCH METHODOLOGY

Research is descriptive and explorative in nature to meet the research objectives. The present study is based on secondary data and the information have been collected from various sources i.e., published research, web sites, newspapers, and the travel and tourism magazines that carry medical tourism related information.

### REVIEW OF LITERATURE

**Anuj Tiwari & Dr. Kamal Jain (2023)** This paper describes the smart city projects in India namely Lavasa: Smart Hill City & GIFT: Gujarat International Finance Tec-City. By 2050, the urbanization in India is expected to raise up to 70 percent compared to only 30 percent in 2011. According to the McKinsey Global Institute Analysis Report, India will have 68 cities with 1 million or even more than 1 million Populations, 13 cities with more than 4 million population & 6 megacities with population of 10 million or more by year 2030. A Smart City is the integration of technology into a strategic approach to sustainability. Smart city is a booming international phenomenon. According to the statics over 2000 smart city projects have been started or going on in Asia, Europe America & Africa.

**Prof. Rahul Wantmure and Dr. Murlidhar Dhanawade (2016)** Indian cities and cities around the world is gradually evolving. It is not a sudden decision with planned infrastructure in advance. The concept of Smart City has suggested in a planned city, with such impact that each activity carried out in the city is supervised and controlled by technology. Internet of things is an emerging technology in the IT world that can be explored to its zenith to achieve the goal of building a smart city. Building alone is not enough, but to maintain and sustain their identity. The integrity and authenticity are another task to be processed and implemented. There are several challenges in making a smart city in India, as there are several implicit and explicit obstacles that must be confronted. A smart city model is not a solution because each city is unique in its existence. However, a prototype development is needed by having a logical design using for Smart City using IoT.

**M. Jaradata, et al. (2015)** This paper describes the smart sensor networks which provide multiple opportunities for smart grid applications, including energy monitoring, energy demand management, coordination of distributed storage etc. Because of its low cost and ease of implementation, intelligent sensor networks are likely to be used on a large scale in the future of smart grids. Processing and analysis of these data reveals a better insight that can help experts improve the operation of the power grid to achieve better performance. This paper analyzes and it provides practical recommendations to be used in the future of the smart grid and the Internet of things. It also discusses about the techniques used to manage large volumes of data generated by sensors and meters for application processing.

**Rocco Papa, Carmela Gargiulo, & Adriana Galderisi (2013)** The concept of smart city is providing the solution for making the cities more efficient & sustainable. It is quite popular in the policy field in the recent years. During the 1990's the development of the information technologies was at the peak level & people thought that new technologies can produce new forms of productions, markets, society organisation, industries, business districts, residential districts & so on. The term smart city has become more and more widespread in the field of urban planning. Urban planners could provide the necessary guidance for making cities smart by using smart devices and smart concepts.

**Robert E. Hall (2000)** The vision of the smart city is the urban centre of the future. The systems and structure will monitor their own conditions and carry out self-repair. The smart materials and structures are also known as the intelligent or adaptive materials. The smart city concept was in a planning stage since late 1998, but it received its first funding in January 2000. The future will require rethinking of the relationships between government, city managers, business, academia and the research community.

**Singh, L (2014)** The research reveals that the key competitive advantages of India in the medical tourism arena arise from the following: low-cost advantage, strong reputation in the advanced healthcare segment (cardiovascular surgery, organ transplants, eye surgery etc.) and the diversity of the many and unique tourist destinations available in the country.

**Sundar,I (2012)** This paper deals with concept of medical tourism and its emerging trends. It outlines the need for medical tourism, medical tourism segments and major hubs in medical tourism. This paper highlights the growing competition in medical tourism. This paper makes a special note on Indian medical tourism, Indian medical tourism scenario and comparative cost advantage of Indian tourism. This paper concludes with some policy measures to improve the performance of medical tourism in India. There are concerns that it could encourage the movement of health workers from the public to private health sector.

**Major Keys and Dimensions for Smart City Concept:**

The research paper entitled “Smart Cities in context to Urban Development” by Sejal S Bhagat, Palak S Shah & Manoj L Patel (2014), Infrastructure plays a major role in the urban development. Some cities have fully grasped the possibility of becoming “Smart City”. Smart Cities can be identified and ranked along the six main keys or dimensions.

1. Smart Economy
2. Smart Mobility
3. Smart Environment
4. Smart People
5. Smart Living
6. Smart Governance

The Smart City vision involves the use of infrastructures like smart grids alongside various forms of renewable energy generations & building new systems of mobility based on the distributed network. A Smart city will be a city whose community has learned to adapt & innovate. The framing of the smart city is done by the planners, policymakers, executives, city departments, developers and industry.

**Demographic and Infrastructure Profile of Belgaum Smart City:**

The city of Belgaum is nominated and selected for smart city mission of Govt. of India and located at the northern tip of Karnataka, and borders the adjoining states of Maharashtra and Goa. There is a proposal to make Belgaum the second capital of Karnataka, owing to its commercial and industrial importance within the state. The demographic and infrastructure profile of the city is as follows.

**Demographic Profile**

Indicator	City (Municipal Corporation)	State (Urban)	India (Urban)
Total Population	488157	23625962	377,106,125
Total Population of UA (if)	610350		
Share of ULB population in District Urban population (%)	40.30		
Population Growth Rate (AEGR) 2001-11	2	2.74	2.76
Area (sq.km)*	99.61		
Share of ULB area in district (%)*#	.74		
Density of population (person per sq.km)*	4900.68266		
Literacy Rate (%)	89.82	85.78	84.11
Schedule Caste (%)	7.83	12.61	12.60
Schedule Tribes (%)	3.25	3.47	2.77
Youth, 15 -24years (%)	18.46	19.78	19.68
Slum Population (%)	10.76	1.60	17.36
Working Age Group, 15-59 years (%)		67.04	65.27

Source: Census of India, 2011, \* District Census Handbook, Census of India, 2011 #The ULB is spread in more than one district

**Infrastructure Status:**

Indicator	City (Municipal Corporation)	State (Urban)	India (Urban)
% of households with access to tap water (from treated source) within Premises	90.14	68.39	84.14
% of households with access to electricity	97.59	96.42	92.68
% of households having toilet facilities within premises	91.44	71.57	72.57
% of household Waste water outlet connected to drainage	88.82	87.60	81.77
Type of sewerage system*	Underground sewerage system		
Type of solid Waste system*	Door to Door		
% of households with access to Computer/laptop with internet	8.58	10.96	8.27
without internet	12.96	12.63	10.40
% of households with access to mobile phones	61.57	64.79	64.33
Ownership Pattern of Housing (%)			
Owned	61.54	51.05	69.16
Rented	35.47	46.05	27.55
% of households living in congested houses	28.39	35.10	32.94
<b>Indicator</b>			
		<b>City (Municipal Corporation)</b>	
No. of Hospitals per 1,00,000 people *	20		
No of Schools per 1,00,000 people			
Primary	41		
Middle	33		
Secondary	23		
College	13		

Source: Tables of Houses, Household Amenities and Assets, Census of India, 2011

\* District Census Handbook, Census of India, 2011

**Prospective Growth of Medical Tourism in Belgaum District:**

Belgaum is a city of development of smart city and a municipal corporation in Belgaum district in the state of Karnataka, India. The city is nearly 2,500 ft. (762 m) above sea level and is the headquarters of Belgaum district, which borders the states of Maharashtra and Goa. Belgaum is also the headquarters for the Belgaum division. The division comprises the districts of Bagalkot, Belgaum, Bijapur, Dharwad, Gadag, Haveri and Uttara Kannada. Belgaum has established itself as a prominent Destination of world leisure Belgaum for its natural beauty and cultural assets. The growth of Tourism in Belgaum has been induced by the buyer driven factors. The collective marketing effort through the tourism department has been limited. The scenario of Medical Tourism is also not much different from leisure tourism. Medical tourism in Belgaum grew without much wilful collective effort. It was recognized as an opportunity by some sectors, particularly the Ayurveda sector who took some collective effort to convert Belgaum as source for Ayurveda treatment. Then came Dentistry and Modern Medicine. A combination of many factors has led to the increase in popularity of medical tourism in Belgaum:

- Traditional systems of medicine like Ayurveda and Siddha are widely popular in the state, and draws increasing numbers of tourists
- High costs of healthcare in industrialised nations
- Ease and affordability of international travel
- Improving technology and standards of care.

The major specialties of Medical Tourism in Belgaum Smart City are the following:

**Modern Medicine**

- Cardiac Care, Orthopedic, ENT, General Surgery
- Cosmetic Treatment, Urology, Ophthalmology, Fertility Treatment, Neuro Surgery
- Dental care

### Alternate Medicines

Ayurveda, Homoeopathy, Sidha, Naturopathy, etc.

The following are the major Medical Care Centers for modern medicine and alternative medicine in Belgaum district:

- a) KLES Hospital and Medical Research Center, Belgaum
- b) Shri J.G. Co-Operative Hospital and Research Institute Ltd., Ghataprabha. (T.B. cure)
- c) Karnataka Health Institute, Ghataprabha.
- d) R. B. Patil Cancer Hospital, Ghataprabha.
- e) Belgaum Cancer Hospital- Belgaum
- f) KLE'S Kankanwadi Ayurvedic Hospital, Shahapur, Belgaum
- g) Kasbekar Metagud Clinic (KMC), Belgaum
- h) Ginde-Jirage Hospital, Khade Bazar, Belgaum
- i) District Civil Hospital Belgaum.
- j) Infertilisation Center- Belgaum

### CONCLUSION

The Belgaum Smart City is the city of attracting medical tourists not only to Belgaum City but also various locations of the district as well. It is concluded that,

1. Promoting medical tourism industry in Belgaum district by means of smart city concept should be paramount which caused to raise the awareness of medical service seekers. It is necessary for these organizations to specify the significance of raising the standard and improving medical and tourism facility in the various locations of across the district.
2. Knowing the proper factors of marketing mix for attracting medical tourism have been included special profits studying the above six key factors and dimensions such as Smart Economy, Smart Mobility, Smart Environment, Smart People, Smart Living, Smart Governance plays a vital role in growth of medical tourism.
3. Medical tourism in the fore front is backed by the corporate hospitals offering high end infrastructure, medical amenities, allied services and an effective healthcare network with the hospitality sector.
4. These are indeed the private hospitals that have gone one step ahead in commercializing their services, with a high-end sophistication, in the local as well as international market.
5. Hence the researcher predicted that Belgaum Smart City concept is a prospective boom for the growth of medical tourism in Belgaum district of Karnataka state.

### REFERENCES

- [1]. Anuj Tiwari and Dr. Kamal Jain, "GIS Steering Smart Future for Smart Indian Cities." International Journal of Scientific and Research Publications, Volume 4, Issue 8, August 2014.
- [2]. Sejal S. Bhagat, Palak S. Shah and Manoj L. Patel, "Smart cities in context to Urban Development." International Journal of Civil, Structural, Environmental and Infrastructure Engineering Research and Development, Volume 4, Issue 1, February 2014, pp.41-48.
- [3]. Charbel Aoun, "The Smart city Cornerstone: Urban Efficiency." Schneider Electric White Paper, 2013
- [4]. Rocco Papa, Carmela Gargiulo and Adriana Galderisi, "Smart cities: Researches Projects and good practices for the cities." TeMa Journal of Land Use, Mobility and Environment, 2013, pp.5-17.
- [5]. Robert E. Hall, "The Vision of a Smart City." 2nd International Life Extension Technology Workshop, 2000.
- [6]. Gill, H. and Singh, N., 2011. Exploring the Factors that Affect the Choice of Destination for Medical Tourism. Journal of Service Science and Management, 4, pp. 315-324.
- [7]. [www.businessworld.com](http://www.businessworld.com)
- [8]. [www.medicaltourism.org](http://www.medicaltourism.org)
- [9]. [www.indomedicaltourism.com](http://www.indomedicaltourism.com)
- [10]. [www.myhealthcareconsultantsindia.org](http://www.myhealthcareconsultantsindia.org)
- [11]. [www.medinetindia.com](http://www.medinetindia.com)