

*Preliminary communication*  
(accepted July 30, 2013)

## **AN IMPLICIT EFFECT OF THE HEALTH INSURANCE PORTABILITY AND ACCOUNTABILITY ACT ON MEDICAL TOURISM IN INDIA**

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### **Abstract:**

In today's world, the concept of implementing any standard is very much necessary for any nation to stand on a global level. Medical tourism is one of the most emerging industries in India. Many tourists from different nations travel across the world in order to reach India for medical facilities. There are several reasons for choosing this destination which includes reduced cost, lesser waiting time, well-trained Doctors and advanced technology as well. But at the same time, what hinders the growth of medical tourism in India is that the security measures in relation to data confidentiality and privacy is not up to the mark. There is a need for a specific and global standard so that the quality of service is improved which will also make the medical sector more reliable for the medical tourists here. U.S. is one of the major hosts in the field of medical tourism but the major problem is the high cost and long waiting queues. The major reason for choosing US as a place for availing medical services is the standard of services and a better level of data security. HIPAA (Health Insurance Portability and Accountability Act) was enacted in 1996 in the U.S.in order to protect the health related information of the patients. If any standard of such a nature is implemented in India then it will be a boom to the medical tourism industry in India. This paper deals with the benefits of implementing HIPAA in India, taking in course the share of Medical Tourism in the GDP of the Nation.

*Keywords:* HIPPA, medical Tourism, Health industry, GDP.

*Jel Classification:* I13, L83

### **INTRODUCTION**

Medical tourism can be defined as movement of the patient from the developed nations to comparatively less developed regions for medical services in order to skip the medical services provided in their own society. It is not as same as the normal locomotion of the medical patients from a less developed region to a developed region for health services that is not available in their own community. Medical tourism is an emerging sector in India and is expected to grow dynamically. The leader in this field

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is the U.S. and the western culture is now adapting the trend of international travel for medical services and it is also increasing effectively.

## **REASONS FOR MEDICAL TOURISM**

There are basically three important reasons for people to travel abroad:

- Medical costs;
- Waiting lists;
- Advanced technology

### **Medical costs**

This is the major reason for a person to travel abroad with the motive of medical treatment. In most the cases, there is no health insurance of the patient and they fail to pay a huge amount in times of need. Cost is always an important factor when any kind of expense is concerned. People want an optimal investment and want to derive maximum benefit out of it. Cost therefore governs the medical tourism at the top most level.

### **Waiting lists**

When it comes to the factor of time, a person will always prefer to avail the medical facility as early as possible. He will not bear the pain of waiting for too long in order to avail any surgery or other health services if the same is available abroad in a short period of time.

### **Medical technology**

When it comes to technology, a person will always prefer that his treatment should be done with a more advanced technology even if it is available abroad. Different regions have got different areas of medical research which is actually another reason for the medical patients in order to meet their respective needs.

## **ADVANTAGES**

The medical tourists find various advantages that include:

- Cost reduction;
- Latest technology;
- Lesser time period etc.

## **INDIA IS CHOSEN AS A DESTINATION**

### **Advanced medical services**

India now stands at a global level in the field of medical services due to its well-advanced health services offered by the private sector. Patients from various regions come here and have a pleasant stay while availing the medical services. The fact of the matter is that the doctors here have obtained medical training from different western institutes and are capable enough to handle the cases.

### **Government support**

Indian government is also facilitating the medical sector and is focusing on improving medical tourism in India by assisting the hospitals in matters like funds for their

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maintenance and building a better infrastructure. Several measures have been initiated by the Ministry of Tourism in order to promote Medical Tourism. This includes promotion and overseas markets and production of publicity materials like brochure, CDs and films etc. and their distribution in target markets.

Financial support is provided by the Ministry of Tourism but only to the approved service providers concerned with medical tourism under the scheme of market development. the Joint Commission International and NABH (National Accreditation Board for Hospitals and Healthcare Providers). Medical Tourism facilitators (Travel Agents/Tour Operators) approved by the Government of India has been engaged in Medical Tourism subject to adherence to scheme guidelines and availability of funds. The Medical Tourism activity is mainly driven by private sector. The Ministry of Tourism only plays the role of facilitator in terms of marketing and promoting this in key markets.

### **Geographical location**

India is located in Asia with all the surrounding countries that are the heart of East Asia. The geographical location is therefore also favorable factor for tourism and helps to attract more and more foreign people to travel to this place. Apart from this, it is also a very popular tourist place which has its own significance and therefore, foreigners easily get attracted to this place.

### **Language barrier**

There is no language barrier in India as most of the population here are able to understand and speak English easily. Therefore, the foreigners will not find it hard to communicate with the people here.

The Tourism Statistics published by the Government of India show that there has been an increase in numbers for foreign medical tourists from 144 lacs in 2009 to 195 lacs in 2011. Standing on a global level and having all the facilities to that extent is not enough in today's world. There has to be something that makes the industry stands on a platform that is self evident to show its actual position. The need therefore arises for any standard or regulation that specifically deals with the medical sector and has been made specifically for the medical industry itself. In this paper, we are taking HIPAA (Health Insurance Portability and Accountability Act) of 1996 which is a legislation of United States. The reason for choosing a standard of this Nation is that US is one of the most preferred destination for medical tourists.

### **HIPAA**

The Health Insurance Portability and Accountability Act was enacted in 1996 by the Congress of United States and was signed by the then President Bill Clinton. It contains provisions that deal with the protection of health insurance for workers as well as their families in case they change their job or unfortunately lose it. Some of the provisions talk about the establishment of national standards that will cover the areas dealing with electronic transactions for health care etc.

There are also Privacy Rules given in the standard that deal with the protection of personal information that is under the possession of concerned authorities and gives rights to the patients related to that information. There are also conditions given in these Rules that deal with the disclosure of information in certain cases and for important purposes.

Another part of this standard contains the Security Rules that mention a series of safeguards that cover various aspects like physical, technical and administrative safeguards for the entities covered under the Act in order to give assurance to the confidentiality, integrity and availability of the health information.

## 1. LITERATURE REVIEW

Bookman and Bookman's study (2007) has carved out the benefits of medical tourism in the developing countries. They have told that it had to focus on providing a driving force to the local economy by enhancing the work opportunity, making the health services easily accessible and giving birth to new opportunities in the enterprises. They have also mentioned that the healthcare in a particular destination relies on the economic development which in turn depends on the basic foundations of the country. Therefore, it is mandatory that the medical tourism should provide certain benefits to the host just because it has positive effects on the economy of that nation.

It has been revealed by a report of RNCOS with the title 'Booming Medical Tourism in India', stating that the Indian medical tourism industry is in its early growth stage and has a potential to grow dynamically and is supposed to generate revenues of around \$3 billion by the year 2013. Apart from this, it has also been stated that the share of Indian Medical tourism industry shall be reaching at around 3% by the end of the year 2013.

Jose R, Sachdeva S. have dealt in their work with the factors that determine the growth of medical tourism in India. They said that there is an active participation of the stakeholders in the Private hospitals and the other factors like the well trained medical staff and Doctors, the technologies used and the rate of success along with the outstanding nursing care and absence of waiting time for surgeries and that too at an affordable cost cannot be ignored at all. Besides this, there are certain other factors like the attractive tourist places, diversification in the cultures and festivals, religious and archaeological sites are other driving factors.

Rajagopalan Krishnamurthy and Anuradha Sriramhave mentioned that the benefits of the employee's health is an important trend in the health insurance business which in itself is a promising market. The sole aim of the organizations is to provide a better healthcare facility with the management of employee healthcare plans which is actually a challenging task, which ensures a better productivity and loyalty of the employees. The Indian Government can play a very important role in the development of medical tourism by taking steps and to perform the roles of a regulator as well as a facilitator by providing the investment in healthcare as well. some of the initiatives may be reduction in import duty on medical equipments, forming committees for the promotion of medical tourism etc. the recommended strategies in the paper were image building of India as a better place for medical tourism, focusing on new products for medical tourism, maintaining a balance between quality and cost of the medical services, making online and offline materials available to the customers. The most important thing that was dealt was the need of attaining the standards and accreditation in order to assure the quality of treatment and meeting the needs of the existing target markets.

The growing economy and changing environment of medical industry made it more vulnerable for the confidentiality and security of the critical information of the public. Regulatory compliance like HIPPA provides a standard for the secure

information flow of medical related data in electronic form. It was mainly enacted to deal with the issues like health coverage between changing jobs and inaccuracy of the healthcare systems. It includes all kind of provisions related to pharmaceuticals, insurance, payment and reimbursement systems and healthcare providers. This regulation ensures the confidentiality, integrity and availability of the health information while creating, receiving, maintaining or transmitting it in electronic or non electronic mode. This enacted the safeguards for physical, technical, procedural aspects of the medical industry.

What favors the implementation of HIPAA is that it always promotes the standardization of the information residing in the medical field. The major flaw in the Indian health system is that the decision makers are devoid of the information that they actually need. The only reason for this fact is that there is no such standardization that regulates the process of information flow. This in turn hinders the existence of the quality research data and if they are needed then a huge sum of money has to be spent on it. The government agencies have announced for some common data standards which is just a limited approach in this direction. Privacy is the second concern in this modern era. The patients are always concerned with the maintenance of privacy in today's world. There is a need for a standardized approach covering the two aspects of behavior and technology in order to make available a more secure data process for the consumers and the patients. Giving ownerships to the patients is another thing required in order to facilitate a better move which also the need of the hour. This will have two important affects: this will give access to the patients of their own information as well as the data flow shall be improved amongst the providers and the healthcare facilities.

## 2. MEDICAL TOURISM FACTS AND FIGURES

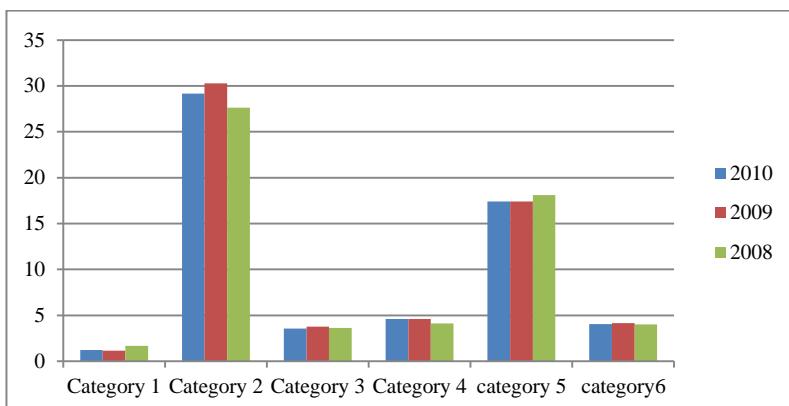
The table mentioned below shows the Medical tourism prices in U.S. and in India. The difference in the medical procedure has been mentioned and it is evident here that there is a lot of difference between the prices in both the countries.

**Table 1.** Medical Tourism Prices in U.S. and in India

Procedure	U.S.	India
Heart bypass (CABG)	113000	10000
Heart Valve replacement	150000	9500
Angioplasty	47000	11000
Hip replacement	47000	9000
Knee replacement	48000	8500
Gastric bypass	35000	11000
Hip resurfacing	47000	8250
Spinal fusion	43000	5500
Mastectomy	17000	7500
Rhinoplasty	4500	2000
Tummy Tuck	6400	2900
Crown	385	180
Tooth whitening	289	100
Dental implants	1188	1100

The adverse affects on the other hand the concept of covered entity in this legislation in somewhat ambiguous. When it comes to penalties in cases of violation of the guidelines of HIPAA that includes fines as well as criminal prosecutions, the interpretation shall be done in a very strict sense. The data flow process in the healthcare system includes more than one entity and this will create a situation of complexity if a narrow interpretation of the standard is taken and there will be that the cost of the providers will be increased up to double. It is not an easy task for the medical practitioners and the clinics to implement this standard. They will have to sustain their traditional practice along with the implementation of such standard. The whole environment of paper records and technological front has to be updated and regulated in order to meet the needs of such compliance and there will be a huge rise in the cost. The clinical research work shall also be affected as there will be a more secure information flow and the delivery system of the healthcare and the use of few services shall be affected.

## 2.1. Relationship between medical tourism and HIPAA



**Figure 1.** % of Medical Expenditure (Annual report 2011–12, Ministry of Tourism, Government of India)

*Note:*

Category 1: Resources for health (external) % total health expenditure.

Category 2: General government expenditure on health as a percentage of total expenditure on health.

Category 3: General government expenditure on health as a percentage of total government expenditure.

Category 4: Private prepaid plans as a percentage of private expenditure on health.

Category 5: Social security expenditure on health as a percentage of general government expenditure on health.

Category 6: Total expenditure on health as a percentage of gross domestic products.

The Figure 1 shows the percentage expenditure on health by various means and methods including the sphere in which expenses are made. The Category 6 clearly shows the percentage of expenditure shared in the GDP of India.

Health care crossing the borders is a dynamic field and is growing continuously. Quality health care is available at reduced cost in the developing countries and people residing in the more developed countries are taking advantage of this opportunity. Many medical procedures are a necessity that most people cannot afford in their residing nation while, some surgeries and treatments depend upon the individual choice of the individual and are out of the scope of government programs and private. Medical tourism is now becoming a part of the nation's economy.

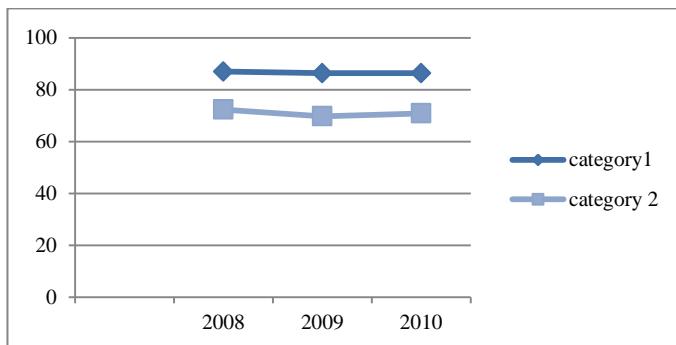
Cost effectiveness alone cannot be considered as enough to attract medical tourists in India. There are various perceptions that are not in its favor like the standard of public hygiene, existence of some contagious diseases, bad quality of health care services especially in the Government Hospitals; practices for waste management etc. There are also some infrastructure related problems such as the air connectivity, supply of basic necessities like water and power, the problem of traffic congestion especially in the metro cities is also another factor.

## 2.2. Success story of Indian medical tourism

- Indian specialists have performed over 500,000 major surgeries and over a million other surgical procedures including cardio-thoracic, neurological and cancer surgeries, with success rates at par with international standards.
- More than 500,000 major surgeries and more than a million other surgeries have been performed successfully as per international standards.
- India (98.7 %) has a higher rate of success of cardiac bypass than U.S (97.5%).
- India has 85% success in 110 bone marrow transplants and 95% in 6,000 renal transplants.
- India stands on the 2<sup>nd</sup> highest position according to its number of qualified doctors.
- India attracts medical tourists from more than 50 countries that include Canada, Australia, France, Pakistan, UK, USA, Vietnam etc.
- Government of India has approved 100 per cent Foreign Direct Investment for the health related services.

Government's health expenditure is less than one-fourth of the total expenditure on health in India and therefore does not attract the private sector to increase its investment in this sector. The per capita expenditure on health was US \$27 in the year 2003. Private sector can play a major role in order to enhance the healthcare infrastructure in India.

Figure 2 clearly shows the percentage of expenditure that is done by anybody as his personal expenses. It shows that there has been an increase in the private expenditure during the year 2010 as compared to 2009.



**Figure 2.** % of Private Expenditure on Health (Annual report 2011–12, Ministry of Tourism, Government of India)

*Note:*

Category 1: Out-of-pocket expenditure as a percentage of private expenditure on health.

Category 2: Private expenditure on health as a percentage of total expenditure on health.

Healthcare delivery all over the world is now been enabled by sector of information technology. The present situation is that the organizations related to healthcare have been estimated to outsource around 10% of their information technology requirements. But, it's also been expected to increase in the near future and thus providing future opportunities to the Information Technology Industry in India. India has been attracting traditionally the business of outsourcing in the fields of digitizing the records related to patient health and the processing of the medical insurance claim. This field is getting popular form day by day because of the expansion of its scope to cover some high-end services like analysis of clinical data, chemical engineering and biometric services. The backbone of such services is no doubt the strength of India in the field of information technology which will be utilized in order to support these knowledge processing activities. In order to remove the gap between the patients and the information technology, the help of some specialists may be taken. These specialists may also look after and monitor the patient's health conditions.

This is being further strengthened with the outsourcing of high-end services such as clinical data analysis, biometric services and chemical engineering.

The two important aspects are the standards and the quality of services that cannot be avoided by the foreign medical tourists in any case. There have been situations when some warnings were given in the developed countries as there is always a doubt created in the minds of the medical tourists in regard to the quality of health services that are being offered and also the complications related to post-operations. There will always be a problem for the coverage of health insurance if there is absence of some minimum healthcare standards. The quality parameters of the hospitals and healthcare services in the developed countries have to be followed by India if it wants to stand on a higher footing in terms of quality of service. The upliftment can be done if the Indian hospitals achieve certain International health standard and flaunt the consistency in their processes and performance.

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Federation of Indian Chambers of Commerce and Industry state that the Health Market will rise up to 50 billion U.S. dollars and the estimated GDP growth will be between 6.2% and 8.5%. Outsourcing and Globalization help to derive profits for India by the common means of Medical Tourism. Development of the Medical Tourism industry will help in improving the public image of the nation. The indirect marketing of business and tourism for India is done by those foreigners who visit India for availing medical services.

The Privacy rules contained in HIPAA provides protection to the health information that has been held by the covered entities under the standard and also gives certain rights to the patients in relation to the same. It also deals with the necessity of disclosing the information in matters concerned with the care of the patient and for certain other purposes as well.

Security Rule is another aspect of HIPAA that deals with a series of safeguards—physical, technical and administrative. These safeguards are provided to the covered entities in order to maintain the three pillars of confidentiality, integrity and availability in relation to the electronic health information that is protected.

The rules given in the Standard cover under their ambit the health plans, the health care providers that are in the business of transferring information related to health in electronic form, the clearing houses related to healthcare services.

The scope of protected health information is governed by the privacy rule. It covers all the information in the form of a medical record that has been held or is transmitted by any covered entity under the Act or the business associates of such entity. It may be in any form and would have been stored in any medium.

### **2.3. Cost of implementing HIPAA**

There are several factors that govern the cost of implementing HIPAA in any organization. The first and the foremost is the type of the organization on which the standard is to be implemented. It may vary between clinics to hospitals to the clearing houses. The second thing is the size of the organization. The culture of the organization is another factor; some may be conservative about the privacy issues related to a patient. They will find HIPAA as a golden opportunity in order to improve their compliance issues. The infrastructure of the organization is another factor which may be high-tech or with minimal security controls. The risk tolerance level is another factor that governs the cost of HIPAA implementation.

Peter Kilbridge, in April, 2003, reported on the financial cost of HIPAA in America. He cited that the estimated average cost of HIPAA compliance is around \$16 per employee. Another study shows that for a small physician group, it will be around \$10,000 whereas a large and integrated-delivery organization, it will cost around \$450, 000.

### **2.4. Benefits of implementing HIPAA**

According to the report published by RNCOS, India's share in the global medical tourism industry will be reaching at around 3% by the end of 2013. The December 2010 report with the title 'Booming Medical Tourism in India', states that the industry

should generate revenue of around \$3 billion by 2013. The above fact indicates that the medical tourism industry in India is currently in the initial phase of its growth stage and holds some potential to grow and evolve dynamically.

The aim with which HIPAA was enacted was the reduction of the frauds and abuses that existed in the health care services. The Administration Simplification Provisions under HIPAA establish standards related to the maintenance of health related information and electronic exchange of the same. The outcome of the enactment was a framework that covered privacy and security standards that find their existence on the platform of states, health systems, individuals and the individual organizations.

HIPAA establishes the need for a better standard of health services by regulating the health plans, the information flow in the medical field and the places where information is stored. Its non-compliance will definitely result in arising legal liability and imposition of penalty which may result in prohibition of continuation of any kind of business with the existing business partners.

It may also result in the risks that may vary from litigations to penalties, destruction of the organization's reputation in public etc.

The Privacy and Security practices given under HIPAA are the best practices that exist in any industry that can result in improvement in the protection of individual's health information. The Rules set a specific standard that have been formulated in order to meet the expectations of the general public and clearing the vision as to how the industry related to health sector has to manage the health information.

Privacy is actually living in one's own space and a person's health is the most private matter of all. The medical information contained in the records of a patient is very personal detail about a person's life. The physical and the mental health is documented in the report and include information as personal as the financial status and relationships etc. That is why it is very important to protect such information in order to maintain the confidence of the medical tourists.

### 3. MATHEMATICAL ANATOMY OF MEDICAL TOURISM IN ECONOMY

The major reason for medical tourism is the factor of cost. People do travel from one nation to other destination just because they get the same standard of medical service at a lesser cost. There are several elements that are included determining this cost factor. They are:

- a) Travelling cost;
- b) Expenses on stay;
- c) Cost of treatment.

Medical tourism will prove beneficial only when the cost of medical tourism is lesser than the cost of treatment in the residing nation of the person. Mathematically,

$$P_{MDT} = C_N - (T_C + E_S + C_T) \quad (i)$$

Where,

- $P_{MDT}$  = Profit derived from medical tourism;  
 $C_N$  = Cost of treatment in the residing nation;  
 $T_C$  = Travelling cost;  
 $E_S$  = Expenses on stay;  
 $C_T$  = Cost of treatment in the destination.

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Apart from the health sector, medical tourism has a lot of associated benefits that are derived by the different sectors such as- the tourism industry, the hotel industry, the pharmaceutical industry, the health insurance sector. The diagram below shows the actual position of the medical tourism sector which is surrounded by the various other sectors whose economy is affected.

### 3.1. Model to calculate the effects on gdp after implementing HIPAA

Before moving to the calculation of cost impacts of HIPAA in national GDP we will calculate for individual organization like:

$$R = B * T \quad (ii)$$

Where,

R = return on the value,

B = Benefit margin,

T = total Turnover of implementation of HIPAA in organization

Benefit margin can be calculated as

$$B = N/CP \quad (iii)$$

Where,

N = net income,

CP = cost received from patients.

Total Turnover can be calculated as

$$T = CP/TOA \quad (iv)$$

Where,

TOA = total cost of the organizational assets

Hence equation (ii) can be written as

$$R = (N/CP) * (CP/TOA) \dots \dots \dots \quad (v)$$

Further N can be written as

$$N = (\text{cost taken from patients} - \text{total cost})$$

This is the individual organization cost evolution. Now seeing cost evolution is in terms of GDP. The GDP of a nation is governed by several factors and every sector has some role in determining it. GDP of India is calculated by the expenditure method. According to this method,

$$GDP = C + I + G + (X - M) \quad (vi)$$

Where,

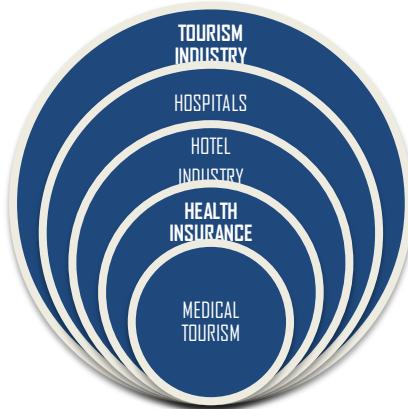
C = Consumption;

I = Investment;

G = Government Expenditure;

X = Gross Export;

M = Gross Import.



**Figure 3.** Sectors Related to Medical Tourism in India

As stated above, GDP is governed by several factors its calculation is equally important. The outcome of calculating GDP helps a nation to display the economic progress of it. Therefore, it is very much important to calculate the effect of implementing HIPAA on the economy of India as it is the only means to show the positive effects of its implementation.

The question that arises here is that how will a person be able to calculate the effect of implementation of any standard on the economy of a nation. For this matter, the first thing which is to be done is to find out all the key factors that will be affected by such implementation and their respective shares in the GDP of the Nation. The next thing is to find out the respective GDPs of the year before the implementation of the standard and the year next to its implementation.

In order to calculate the effect of implementation of HIPAA, we need to keep in mind the factors that affect the GDP. If the industry of medical tourism gets benefitted by its implementation then it is but obvious that other sectors that are related to this sector and govern the GDP of India will also be affected e.g. tourism industry, hotel industry, and insurance sectors as well.

The percentage of increase in the GDP of India after implementation of the standard can be simply written as:

$$P_I = \frac{G_c - G_p}{G_p} \times 100 \quad (\text{vii})$$

Where,

- $P_I$  = Percent of increase in the GDP;  
 $G_c$  = GDP of current year;  
 $G_p$  = GDP of previous year.

But there is another factor that has to be kept in mind before calculating the increase in per cent. There is always some estimated cost that has been calculated by the concerned authorities. It is therefore essential to exclude that per cent of estimated

increase from the GDP in order to find the actual effect on the increase in per cent of GDP after the implementation of the standard. So, the equation will be:

$$P_I = \frac{G_c - G_p}{G_p} \times 100 - E_A \quad (\text{viii})$$

Where,

$P_I$  = Percent of increase in the GDP;

$G_c$  = GDP in current year;

$G_p$  = GDP of previous year;

$E_A$  = Estimated increase in the GDP of the sector affected by the implementation of the standard.

Therefore, if we deduce the equation for calculating the after effects of HIPAA on the medical tourism sector of India in order to calculate the per cent of increase in GDP, we can write:

$$P_{HI} = \frac{G_{AI} - G_{BI}}{G_{BI}} \times 100 - E_{AI} \quad ..(\text{ix})$$

Where,

$P_{HI}$  = the percentage of increase in the Medical sector after implementing HIPAA,

$G_{AI}$  = Share of health industry in the GDP after implementing HIPAA,

$G_{BI}$  = Share of health industry in the GDP of India before implementing HIPAA,

$E_{AI}$  = the estimated annual increase of share of the medical sector in the GDP.

Therefore, if we get the exact value of GDP growth of the concerned years and the share of increase in the health sector is available, the per cent of growth in GDP of India can be calculated easily using this model. Government organizations do make these data available in their reports and therefore they are not far away from the reach of any person who wants to avail such information.

## CONCLUSION

Indian medical industry is an emerging sector. The reasons are obvious- reduction in cost, quality medical treatment, favorable travelling conditions, geographical region, language barrier etc. Standing on a global level and having all the facilities to that extent is not enough in today's world. There has to be something that makes the industry stands on a platform that is self evident to show its actual position. The need therefore arises for any standard or regulation that specifically deals with the medical sector and has been made specifically for the medical industry it. The reason for choosing a standard of U.S. is that it is the most preferred destination for medical tourists. HIPAA is a global standard and will help the Indian Medical Tourism industry to establish its recognition throughout the world.

It is essential that the Governments (both central and the state), industry associations as also the corporate to build appropriate networks across the world with relevant stakeholders. The Government could play a major role in brand creation for Indian health systems that have started attracting international tourists from across the world. This may include promoting India as a secure, technically advanced and a cost effective center for medical tourism. The Government can also play a role in

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negotiating with other States for recognition of mutual standards and systems, which may include the coverage of healthcare expenses incurred in India by the medical tourists, under the Indian healthcare systems.

## FUTURE SCOPE

A recent study on Health Insurance future prospects in India reveals the fact that the health insurance market in India is expected to grow five times to cover at least 10% of the country's population by 2015. The administrative tasks related to the insurance of the individuals are generally handled by the third party administrators. There is no existing legislation in this area and there is a need to implement a proper framework for a better and structured functioning. The future work in this field may be related to the implementation of various other International standards for the upliftment of the Medical tourism. Another area of research may be the enactment of standards in India in order to regulate the health services for the betterment of medical tourism.

## REFERENCE

- Annas, George J. 2003. HIPAA Regulations: A New Era of Medical-Record Privacy? *New England Journal of Medicine* 348 (15): 1486–90. <http://www.mcmaster.ca/ors/ethics/ncehr/2003/apr2003/1486%20NEJM%20HIPAA%20II.pdf> (accessed January 21, 2013).
- Booming Medical Tourism in India, Report, 2012
- Confederation of Indian Industry. 2010. Quality & Patient Safety: The Leadership Imperative. *An Exclusive Newsletter from CII Pulse*. New Delhi: Confederation of Indian Industry, Healthcare Division.
- Crooks, Valorie A., Leigh Turner, Jeremy Snyder, Rory Johnston, and Paul Kingsbury. 2011. Promoting medical tourism to India: Messages, images, and the marketing of international patient travel. *Social Science and Medicine* 72(5): 726–732.
- Dawn, Suman Kumar, and Swati Pal. 2011. Medical Tourism in India: Issues, Opportunities and Designing Strategies for Growth and Development. *ZENITH International Journal of Multidisciplinary Research* 1 (3): 185–202. <http://zenithresearch.org.in/images/stories/pdf/2011/July/16%20SUMAN%20KUMAR%20DAWN.pdf> (accessed January 29, 2013).
- F5 Networks, Inc. 2007. HIPAA Security Compliance and F5 Solutions. *White paper*. <http://www.f5.com/pdf/white-papers/hipaa-wp.pdf> (accessed February 12, 2013).
- Gan, Lydia L., and James R. Frederick. 2011. Medical tourism facilitators: Patterns of service differentiation. *Journal of Vacation Marketing* 17 (3): 165–183. doi: 10.1177/1356766711409181
- Gautam, Anand. Boom in the Medical Tourism Industry. *White paper*.
- Gunn, Patrick P., Allen M. Fremont, Melissa Bottrell, Lisa R. Shugarman, Jolene Galegher and Tora Bikson. 2004. The Health Insurance Portability and Accountability Act Privacy Rule: A Practical Guide for Researchers. *Medical Care* 42 (4): 321–327.
- HIPPA Security Series, 2007. Centre for Medicare and Medicaid Services, Vol.2.
- Jagyasi, Prem. 2010. Medical Tourism Impact: It's More Than Obvious. *Medical Tourism Magazine* (17), October 6, 2010. <http://www.medicaltourismmagazine.com/article/medical-tourism-impact-it-s-more-than-obvious.html> (accessed January 12, 2013).
- Kannan, N., and N. Thangavel 2008. Overview of Indian Insurance Sector. *Academic Open Internet Journal* 22 (March). <http://www.acadjournal.com/2008/v22/part7/p2/> (accessed February 6, 2013)
- Karuppan, Corinne M., and Muthu Karuppan. 2011. Who Are the Medical Travelers and What Do They Want?: A Qualitative Study, *Health Marketing Quarterly* 28 (2):116–132. doi: 10.1080/07359683.2011.545339
- Khansa, Lara, Deborah F. Cook, Tabitha James, and Olga Bruyaka. 2012. Impact of HIPAA provisions on the stock market value of healthcare institutions, and information security and other information technology firms. *Computer and Security* 31 (6): 750–770.

Mishra, Saurabh, Shashi kant Rai, Anushree Pandey, and Vandana Jaiswal. 2013. An implicit effect of the health insurance portability and accountability act ... *UTMS Journal of Economics* 4 (3): 309–323.

---

- Kulynych, Jennifer, and David Korn. 2003. The New HIPAA (Health Insurance Portability and Accountability Act of 1996) Medical Privacy Rule. *Circulation* 108 (8):912–4. <http://circ.ahajournals.org/content/108/8/912.full.pdf> (accessed February 3, 2013).
- Kutkat, Lora, James G. Hodge Jr., Thomas Jeffry Jr., and Diana M. Bonta. 2003. *The HIPAA Privacy Rule: Reviewing the Post-Compliance Impact on Public Health Practice and Research*. *Journal of Law, Medicine and Ethics* 31 (Suppl 4): S70–S72, December 2003. doi: 10.1111/j.1748720X.2003.tb00759.x
- Liginlal, Divakaran, Inkook Sim, Lara Khansa and Fearn Paul. 2012. HIPAA Privacy Rule compliance: An interpretive study using Norman's action theory. *Computer and Security* 31 (2): 206–220.
- Ness, Roberta B. 2007. Influence of the HIPAA Privacy Rule on Health Research. *JAMA The Journal of American Medical Association* 298 (18): 2164–2170. doi:10.1001/jama.298.18.2164.
- Nosowsky, Rachel, and Giordano Thomas J. 2006. The Health Insurance Portability and Accountability Act of 1996 (HIPAA) Privacy Rule: Implications for Clinical Research. *Annual Review of Medicine* 57 (February 2006): 575–590. doi: 10.1146/annurev.med.57.121304.131257
- Perfetto, Ralp, and Nikhilesh Dholakia. 2010. Exploring the cultural contradictions of medical tourism. Specjal issue. *Consumption Markets and Culture* 13 (4): 399–417. doi:10.1080/10253866.2010.502417
- Peters, Christina R., and Katherine M. Sauer. 2011. A Survey of Medical Tourism Service Providers. *Journal of Marketing Development and Competitiveness* 5 (3): 110–116.
- Reed, Christie M. 2008. "Medical Tourism", *Medical Clinics of North America* 92 (6): 1433–1446.
- . 2010. Hot Topic: Medical Tourism. *Plastic Surgical Nursing* 30 (3): 187–190. doi: 10.1097/PSN.0b013e3181ff05bce
- Schoppmann, Michael J., and Denise L. Sanders. 2004. HIPAA compliance: The law, reality, and recommendations. *JACR Journal of the American College of the Radiology* 1 (10): 728–33.
- Sengupta, Amit. 2013. Medical tourism in India: Winners and losers. *Indian Journal of the Forum for Medical Ethics Society*.
- Siegal, Gil. 2012. Enabling Globalization of Health Care in the Information Technology Era: Telemedicine and the Medical World Wide Web. *Virginia Journal of Law and Technology* 17 (1):1–34.
- Tattara, Giuseppe. 2010. Medical tourism and domestic population health. Working Papers 2010\_02, Department of Economics, University of Venice Ca' Foscari.
- Wolf, Michael S., and Charles L. Bennett. 2006. Local perspective of the impact of the HIPAA privacy rule on research. *Cancer* 106 (2): 474–479. doi: 10.1002/cncr.21599
- World Health Organization. 2011. Health Expenditure: Health Expenditure Ratios. World Health Organization.