



Review Article

A Comparative Study of Challenges and Opportunities of Outsourcing in Health Information Technology

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ABSTRACT

Outsourcing is an inclusive, diversely defined term, which refers to transfer of executive or financial control of institutions owned by the government to the private sector. The purpose of the present study was to study the advantages and challenges of medical outsourcing and, more specifically, outsourcing of medical records and the employed information technology. The study was conducted according to descriptive-comparative method on the advantages and challenges of medical outsourcing and the employed information technology in 2012-2013. The data were gathered from information sources, articles, books, journals, and reliable websites on technology development and the advantages and challenges of medical outsourcing in the health area. Findings indicated that factors such as cost decrease, improvement of production process and productivity, quality increase, promotion of customer's satisfaction were included among the advantages of outsourcing. But general medical outsourcing has undergone a slower growth compared to other types of outsourcing. For low income countries, a prerequisite for successful outsourcing was indeed creation of an environment, in which private sector could function effectively.

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Introduction

Outsourcing is an inclusive, diversely defined term, which refers to transfer of executive or financial control of

institutions owned by the government to the private sector. Throughout this process, at any level, the government examined the



possibility of transfer of its duties and facilities as well as transfer or control of assets from the public sector to private and, if it was recognized as propitious, facilitated such transfer^{1,2}. Market orientation may be the most comprehensive definition which could be offered for outsourcing³. In this sense, public sector (government) restricted spectrum of its activities or relegated the ownership or management of some economic entities of its own to market mechanism⁴.

Since the last decade, outsourcing model in medical area has been highly pioneering in several countries, which, by its own, involved some benefits in revolutionization of medical and information technology, transportation, education, and census. Medical outsourcing is absorbing the attention of employees, insurers, institutions, corporations, and any state legislator. Since the last decade, this type of outsourcing has been initiated internationally and notably in developing countries. At present, in developing countries like Argentina, India, Mexico, South Africa, and Thailand it is being implemented such as cost decrease, improvement of production process and productivity, quality increase, promotion of customers' satisfaction, being up-to-date on market, and ability to concentrate on focal, central areas have been included among advantages of outsourcing^{5, 6}. Since identifying strengths and weaknesses as well as opportunities and challenges seem necessary to successfully implement outsourcing in any area, the present article aimed to review the advantages and challenges of medical outsourcing and, more specifically, outsourcing of medical records and the employed information technology. But general medical outsourcing has undergone a slower growth compared to other types of outsourcing⁷.

Materials and Methods

The study was conducted according to descriptive-comparative method on the advantages and challenges of medical outsourcing and the employed information technology in 2012-2013. The data were gathered from information sources, articles, books, journals, and reliable websites on technology development and the advantages and challenges of medical outsourcing in the health area. We found 105 scientific valid articles on this issue by searching valid websites. This article was written by reviewing 89 articles of this collection.

Results

Advantages of medical outsourcing

Promise of medical outsourcing: low cost, high quality, and efficiency have been very fundamental in medical outsourcing. Recently in Special Committee of US senate, outsourcing has been examined as a response to the rapid increase in costs in national health care systems. Financial interests of outsourcing have been common to clients and insurers. Researchers have estimated that changes have been established on different factors, including patients' general health, disease severity, portability of patient, the extent of insurance coverage, and speed of changes⁵. One of the most fundamental purposes of adopting outsourcing policy was efficiency improvement. The existence of incentive to obtain benefit was a factor for decreasing costs and realizing efficiency. The promotion of competition caused efficiency to improve and social welfare to be optimized⁸. Medical outsourcing was an important regulatory instrument for monitoring companies, governments, and insurances in order for interests and quality of provided health care to be maximized in a parallel and efficacious way⁵. Although outsourcing in any area has had a series of predictable concerns,

outsourcing health care systems would require its own conditions because of their complicated setting and particular legal environment⁹.

The challenges facing outsourcing

1. Poor control of the information which clients expected to be kept confidential.
2. High cost of management (in cases where control and management of the centers was implemented indirectly).
3. Loss of intellectual and decision powers as these powers have been relegated to the people outside organizations and/or companies.
4. Poor protection of copyrights, patents, and other rights in this field (these rights are likely to be violated within outsourcing)¹⁰.

Outsourcing medical records section

American Health Information Management Association (AHIMA) in census of April 2006 reported that 43% of the organizations were working in medical records outsourcing area. This result is similar to that reported in the census of 2005¹¹.

In financial payments, a rapid change of process, from manual into electronic, has been occurring¹². According to the reports of people working in outsourcing, medical transcription had the highest proportion of outsourcing, followed by information disclosure⁴. The process of medical information, documentation and its transmission and registration is called transcription and those who work in this field are called transcriber. It is considered as one of the important activities in outsourcing. Some of the important points which large companies working in this field focus on have been listed below:

1. Cost-efficiency

Regarding the increase in the cost of employment and training within outsourcing process, 30-60 dollars is expended to hire a transcript. It is at least three times higher than the cost which is expended by the companies. In addition, in one of New York articles it has been reported that almost 100 million dollars has been expended on transcription of health care information programs. In fact, outsourcing of medical transcription required some infrastructures and equipment whose costs were imposed on service providers, while these costs have been saved, as well¹³. Since one of the main reasons for increase in electronic requests was costly, it has been estimated that the mean cost of the electronic request process was approximately 0.58 dollar, while a manual, written request costed for 1.58 dollars. In this regard, Accountability and Transferability of Health Insurance Bill encouraged the organizations to have the requests change from manual into electrons, which have been facilitated by outsourcing functions.

2. Quality

One of important issues in health centers has been provision of services with high quality and hence, by extension, one of the important goals in outsourcing process has been enhanced by providing services' quality.

3. Work burden

Because of the increase in growth of industry in health care and treatment, work burden has been multiplied, as well¹⁴. As a result, completing all information inside the organization was becoming impossible, meaning that more individuals should be employed; adding infrastructures to solve the problem was necessary and, in this situation, outsourcing was the selected option.

4. Saving information

With digital archives emerging in the outsourcing process of medical records sector, saving information has been facilitated while data, in the past, were saved twice or even three times^{13,5}.

Discussion

Observing the principles of medical records confidentiality in outsourcing process

Individual's health information was one of the most private life aspects and should be tactfully kept, and in case of health care providers has been rarely shared¹⁵. The subject of argument for health care has been reflecting on outsourcing and concentrating on the importance of an individual's security and health information confidentiality⁴. Outsourcing sensitive information has been intrinsically a risky attempt for extra-organizational providers^{16,17}. The public law of personal information right under HIPAA supervision has declared that anyone is required to obtain patient's primary consent to use his/her medical information. In this regard, the last law supervised by HIPAA and amended on 14 Aug 2002 is relevant to outsourcing health, treatment information. In the first draft of this Act any use of patients' data should be conditioned to completion of the consent form and the laws concerning outsourcing process should be addressed, including bills, receivables, and repayments regarding the patient who has received treatment services¹⁸. The necessary of developing a contract between the company who provides services (outsourcer) and the sector relevant to treatment information has been among important factors which has been also considered as important by HIPAA. This contract should be to cover all requirements relevant to patient information set by HIPAA and trade company has been required to observe them so as to monitor trade partners

and beginners. In addition, the minimum standards should be respected in all states^{19,20}.

Today, health care providers have been approaching, implementing electronic file and health information systems and since these technologies have decreased medical errors, gathering the patients' data has become easier and efficiency has improved^{21,22}. Therefore, outsourcing information systems has been a critical decision for healthcare organizations²³.

The reasons for outsourcing information technology in health care

Since the provision of high quality health care required implementation of information technology, which, in turn, required expenditure, the companies' moving toward outsourcing could be attributed to these five reasons as follows:

- 1) To decline and to control prices
- 2) To concentrate on companies' progress
- 3) To access global capabilities
- 4) To free inside resources for other purposes
- 5) To utilize resources which are not finally accessible?

These functions were obvious to health care organizations and other industries; therefore, outsourcing information technology system could bring about the many advantages for providers of information technology²⁴.

Compared with other operating systems, outsourcing was more likely to assume development of information technology systems, so public contracts, particularly concerning services and equipment of information technology in recent years in the USA have been growing rapidly²¹. Although this idea was advertised for advancing investment on information systems, such decisions on outsourcing this technology depended upon several factors as hospitals with prospective payments function

utilized these facilities. Regarding that there have been numerous reasons and theoretical explanations for outsourcing⁶, of which one of the most popular is Transaction Cost Theory^{24,25}, perception of this theory was essential as a conceptual activity because the sensitive, economic factors contributing to commissioning and decision taking on outsourcing technology services of hospital information systems should be seriously considered²⁶.

Advantages and challenges in outsourcing information technology

The advantages of outsourcing information systems included the need for fewer personnel and public costs decline, particularly in the area of investment for purchasing equipment. But, this process was not risk-free and includes some challenges, as well, especially in view of managerial, intra-organizational expectations. These risks include lack of control and presence of some providers with low experience of functions and culture in hospitals. Although outsourcing information systems could not follow the routes followed by industries, outsourcing was inevitable because of the expenses and complexities of hospital information systems functions²⁷.

Conclusion

It is concluded, from findings, that in the outsourcing implemented, there have been decreased costs, increased access, and enhanced health care quality²⁵. Moreover, outsourcing caused competition to increase and some issues such as competition caused the commitments of service providers concerning mistakes removal and deviation eradication in their function to improve. Otherwise, their share of the market would destroy, being attributable to decline in customers' satisfaction^{26,27}. Despite the fact that there were specific risks of medical outsourcing, the number of Americans who

have considered this option as profitable for themselves has not reduced. Underdeveloped countries also, particularly after 1980s, have been moving toward outsourcing²⁸⁻³¹.

Outsourcing personal health care information has been expanding throughout recent years and with the advancement of information technology relevant to patients, providers of health care services also paid a particular attention to the continuation and even acceleration of it. Finally, the majority of medical outsourcing needed a strenuous basis of information technology^{32, 33}. For low income countries, a prerequisite for successful outsourcing was indeed creation of an environment, in which private sector could function effectively. This environment should comply with macroeconomic reforms, promotion of law codification framework, strengthening of monetary system, and decrease in the barriers facing promotion. In low income countries, a fundamental prerequisite for successful outsourcing was the provision of an environment in which outsourcing process could take steps alongside economic growth. For this, it is recommended, for preparing the context of outsourcing, these countries take measures in political and legal areas, promotion of investor thinking, and attraction of public trust.

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