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Healthcare Supply Chain: A Comparative Study of Practices in Emerging Economies

Cadena de suministro de atención sanitaria:Estudio Comparativo de Prácticas en Economías Emergentes

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RESUMEN

Este trabajo involucra la conceptualización de los principales factores operativos de la cadena de abastecimiento médico de Arabia Saudita y la cadena de suministro médico colombiano. Los investigadores de este proyecto consideran que como producto de turismo médico es similar a un producto de consumo en la gestión de la cadena de suministro, hasta cierto punto, muchos de los objetivos de operaciones que se encuentran en una cadena de suministro de fabricación también pueden aplicarse fácilmente a la cadena de suministro de turismo médico. Proponemos y probamos un modelo que se basa en constructos relacionados con la cadena de suministro (calidad, acceso, asequibilidad y confiabilidad) para informar la demanda de servicios médicos tanto en Colombia como en Arabia Saudita..

***Palabras Claves**: Servicio médico, turismo médico, cadena de suministro.*

ABSTRACT

This paper involves conceptualizing the key driving operational factors upstream and downstream both the Saudi Arabian medical supply chain and the Colombian medical supply chain. The investigators of this project consider that as medical tourism product is similar to a consumer product in supply chain management, to a certain extent, many of the operations objectives found in a manufacturing supply chain can also be readily applicable to the medical tourism supply chain. We propose and test a model, that is founded on supply chain related constructs (quality, access, affordability, and reliability) to inform the demand for medical service in both Colombia and Saudi Arabia.

***Keywords**: medical service, medical tourism, supply chain.*

1. Introduction

Medical tourism service (MTS) supply chain is fast gaining momentum, and relationships between its participants, including patients, are increasingly becoming complex and subject to dynamic change. Medical tourism service in emerging countries has arisen as the top-growing component of the tourism industry, despite the global economic downturn. The MTS supply chain is driven by an increasing accessibility of quality healthcare services, and low healthcare costs in emerging countries. Many factors such as high quality, low cost, government support, Join Commission International Accreditation (JCI) and high public-private investments are believed to be contributing to a significant growth in the medical tourism service market in emerging countries including, India, Singapore, Malaysia, Colombia, and Saudi Arabia.

This research is motivated by the significant economic importance of the health and wellness tourism in countries like Colombia and Saudi Arabia, which needs to be modeled, understood and managed. Colombia's health and wellness tourism is expected to enjoy continued strong growth over the next three years forecast period, with annual retail value growth rate of 14% through 2016 to reach Col$1.6 billion. Because health and wellness tourism generates high levels of income and employment, Colombia's government is very active in promoting Colombia's medical tourism services abroad.

Organizations such as Proexport and the Ministry of Commerce, Industry and Tourism support improvements to the local medical infrastructure, increasing the quality of health services, and maintaining competitive prices . In addition Saudi Arabia Health and wellness tourism value is expected to increase at a 3% constant value CAGR reaching sales of SR620 million by 2016. It is important to highlight that Saudi Arabia has managed to get JCI accreditation for more than fifteen of its hospitals while Colombia has only got two (Fundación Cardiovascular and Fundación Santa Fé).

2. State of the art

Medical tourism in itself is not a new practice or a phenomenon. USA and Europe were the industrial, business and healthcare centre's of the world from 1900 to 1997 Asian crisis. The affluent and rich from Asia and the Middle East travelled to these countries in order to receive advanced specialized medical treatment and services. Medical tourism, where patients travel overseas for alternative therapies, diagnostic treatment, complex invasive elective and cosmetic surgeries has grown rapidly in the past decade, especially for heart, cancer, liver transplant, hip- replacement, reproductive, dental and cosmetic surgery.

Medical tourism has been widely acknowledged by academic scholars in this twenty first century (Forgione & Smith 2007; Bookman & Bookman 2007; Brotman 2010; Heung, Kucukusta & Song 2010). Developing economies such as Thailand since 1997 and India since 2003, have been promoting their respective countries as a first world Joint Commission International (JCI) accredited, state-of-the-art medical technology, affordable low cost, no waiting period, health and medical tourism destinations to the world.

For most of the world's population, the gap between the supply of quality medical care and the demand for that care is large and rapidly increasing. The 3-A framework – representing affordability, access and awareness – has been proposed to contain the fundamental elements for the design of a health care supply chain capable of closing this gap (Sinha and Kohnke 2009).

This framework seeks to make it possible to evaluate and improve health care supply chain innovation initiatives and improve the ability of global health care supply chains to deliver high volume, quality care to unserved. The 3-A framework is based on the definition of the health care supply chain as stated by Schneller and Smeltzer (2006, p.30) which defines the health care supply chain as "the information, supplies, and finances involved with the acquisition and movement of goods and services from the supplier to the end user in order to enhance clinical outcomes while controlling costs."

This definition identifies three critical aspects of the supply chain as finances, supplies and information and these aspects are embodied by the three medical care supply chain constructs of: affordability, access and awareness (Sinha and Kohnke 2009).

While supply chain management (SCM) has become a very important concept in the business literature (Ketchen and Hult 2007), there has been some debate as to the definition and scope of the term (Stock and Boyer 2009). In spite of this lack of consensus, there have been many studies that have linked various supply chain practices to improved performance (Kaynak and Hartley 2008).

At the same time as this upsurge in the popularity of SCM, there has also been a well-documented shift of the global economy toward services instead of manufacturing

(Sengupta, Heiser and Cook 2006). However, much less attention has been given to developing supply chain theories that are specific to this growing service sector.

Although a number of studies have attempted to apply principles and frameworks from the manufacturing sector to the service sector (Sengupta, Heiser and Cook 2006; Vandaele and Gemmel 2007), a significant volume of other research has emphasized the uniqueness of the service supply chain and called for more studies which account for these factors. At the same time, other scholars have called for research on supply chain management with specific considerations of industry and operating environment (Babbar et al. 2008).

Like product supply chain, a MTS supply chain can be considered the network of entities that plan, source, fund, and distribute medical services and manage associated information and finances from manufacturers to medical service delivery points. Factors such as cost, speed (waiting period) and reliability (privacy) are of utmost importance in this kind of supply chain (Ferrer and Medhekar 2012). Similarly, the quality management literature has delved into the role and impact of quality improvement initiative in improving both processes and products which in return has a positive impact on financial performance. These quality management tools have been extended to applications in the supply chain, which have been shown to have significant impact (Yeung 2008; Kaynak and Hartley 2008), but the theory in this area is still at a nascent level of development.

In the same spirit, quality management principles have been adopted in the health care industry and have been shown to positively influence outcomes for patients and hospitals (Sage and Kalyan 2006). There are numerous actors and types of relationships involved in making MTS supply chain work: patients, donors and funders, government policymakers, procurement agents, program managers, regulators, suppliers, distributors, and dispensing staff from the public and private hospitals. This research will contribute a service supply chain framework by drawing upon key insights derived from quality management literature.

It is a challenge for the medical system in developing countries such as Saudi Arabia to reduce the waiting time for seeing a specialist and elective surgery. Thus, Hurst & Siciliani (2008), further note that according to Organization of Economic Cooperation and development (OECD) waiting time is used for rationing given the shortage of skilled surgeons/specialists to restrict access to medical care in countries having public provision, that is government supply chain management of health care and universal health insurance these further results in pain and poor health for the patient in the long-run and may reduce longevity and quality of life.

The stark reality of the global medical care market is that many patients who need quality care in developing and underdeveloped countries are either not receiving care or are receiving poor quality care (WHO, 2012). The commonly accepted wisdom is that medical care for many of these underserved communities is simply unaffordable but an argument can be made that the real reason is the unaddressed complexities of the medical care supply chain. In a global marketplace, where goods and services are exchanged across country boundaries at a rapid and efficient rate, the undeveloped state of the medical care supply chain stands in stark contrast. In the management parlance, there is an extreme level of demand which is currently being met by an inefficient supply of quality health care.

Medical tourism in Colombia is heavily reliant on patients coming from abroad. Saudi Arabia provides good option for medical treatments for patients from neighboring countries such as Palestine and Iraq, mainly due to the poor political and economic situation resulting in a poor medical care system. Similarly Colombian medical tourism services are demanded by neighboring countries such as Aruba, Curacao, Ecuador, Panamá and Venezuela. It should be noted that 39% of health tourists coming to the country for medical reasons are, in fact, Colombians who reside abroad, mainly in the United States.

Saudi nationals represent a small proportion of patients in the Kingdom as they prefer to travel abroad for treatment, going to the US or some parts of Western Europe like the UK and Germany. Medical tourism value is expected to increase at a 3% constant value CAGR reaching sales of SR620 million by 2016. In an effort to retain Saudi nationals requiring medical care, the government has plans to open new world-class hospitals and medical centres over the near future; the Ministry of Education has announced plans to establish medical colleges and hospitals for all of the country's 24 government universities. Whilst these are educational hospitals, the plan is for these establishments to provide medical services for patients in the same area. While the importance of the affordability and quality of medical care cannot be denied, it is but one key to unlocking the complexities of care delivery in local communities which requires a solution that has the capacity to address numerous additional factors.

Countries engaging in medical tourism face a number of challenges. In a World Health Organization study on trade practices and export of health services, Díaz Benavides (2002) finds that the main barriers for medical tourism are: non-portability of insurance coverage; perceived quality of health professionals and health care facilities; mutual recognition of professional credentials; lack of standards for electronic medical records; and complexities in cross-jurisdictional malpractice liability. Additional barriers identified by other authors include the difficulties in international travel, cultural and linguistic differences and the management of post-operative complications. Although domestic policies can help alleviate or eliminate some of the barriers, most will require regional and international cooperation. Therefore, it is topical to understand what is the effective role members of the Colombian and Saudi Arabia medical tourism supply chain must play in order to provide efficient health and wellness services demanded by tourists.

Likewise, this study is motivated by the need of supplying quality, timely and affordable medical services in Colombia as well as in Saudi Arabia and the need to understand the predictability nature of demand drivers of international to capitalize, given the significant investment both nations have made in their health system. We then, consider conceptualizing affordability, waiting time and quality as important characteristics upstream and downstream the medical supply chain.

3. Methodology and objectives

The study is designed to quantitatively identify the key drivers of demand in the Colombian and Saudi Arabia medical tourism supply chain. Thus, data is going to be collected using self- administered surveys. The survey is going to be administered to relevant supply chain operatives in Colombia and Saudi Arabia. The surveys will use reliable scales to examine the perception, among the supply chain operatives, on the different factors influencing the decision to demand medical care in Colombia and Saudi Arabia. The scales used for this study's variables are going to be developed and

adapted for this study. Statistical analyses to be used, but are not limited to compare means (or medians) of the Colombian and Saudi Data, to make some correlation, to look at how one or more independent variable(s) and one dependent variable relate to each other and, to measure association between one or more independent variable.

The objective of the research is focused to understand the main drivers of medical tourism demand in Colombia and Saudi Arabia. To build conceptual framework for the medical tourism supply chain in Colombia and Saudi Arabia. To design the data collection instrument (DCI). To pilot and administer the DCI, and preliminary analyze the collected data.

References

Babbar, Su, et al. "Organizational Factors Affecting Supply Chains in Developing Countries." International Journal of Commerce & Management 18.3 (2008): 234-51

Bookman, H, and Bookman, K “Medical Tourism in Developing Countries,” N.Y. Palgrave Macmillan, 2007

Brotman, B, 2010, “Medical Tourism Private Hospitals: Focus India. Journal of Health Care Finance,” vol. 37, no. 1, pp. 45-50.

Díaz Benavides, David, 2002, “Trade policies and export of health services: a development perspective”, Trade in Health Services: Global, Regional and Country Perspectives, World Health Organization (WHO), Washington, D.C.

Darline, V and Gemmel, P, 2007, "Purchased Business Services Influence Downstream Supply Chain Members." International Journal of Service Industry Management vol.18, no .3, pp. 307- 21.

Forgione,D and Smith, P, 2007, “Medical tourism and its impact on US healthcare system,” Journal of Health Care Finance, vol. 34, no. 1, pp. 27-35.

Ferrer, M & Medhekar, A, 2012, “Key operational drivers in the medical tourism industry”, International Journal of Accounting Information Science & Leadership, vol. 5, no. 12, pp.62-76.

JCI (2012), Joint Commission International Accreditation Standards for Hospitals-4th Edition, http://www.jointcommissioninternational.org/ (viewed: 4-10-2012).

Hurst, J. and Siciliani, L, 2008. Tackling Excessive Waiting Times for Elective Surgery: A Comparison of Policies in Twelve OECD Countries. OECD Health Working Papers 6. Paris: Organisation for Economic Co-operation and Development.

Heung, H, Kucukusta, D, and Song, H, 2010, “A Conceptual Model of Medical Tourism: Implications for Future Research,” Journal of Travel & Tourism Marketing, vol. 27, no. 3, pp. 236-251.

Kaushik, S, Heiser, D and Cook, L, 2006, "Manufacturing and Service Supply Chain Performance: A Comparative Analysis." Journal of Supply Chain Management: A Global Review of Purchasing & Supply vol 42, no .4, pp. 5-16.

Kaynak, H, and Janet, H, 2088, "A Replication and Extension of Quality Management into the Supply Chain." Journal of Operations Management vol. 26, no. 4, pp. 468-89.

Ketchen, D, and Hult, G, 2007 "Bridging Organization Theory and Supply Chain Management: The Case of Best Value Supply Chains." Journal of Operations Management vol. 25, no. 2, pp.573- 80.

Sage, W, and Kalyan, D, 2006,. "Horses Or Unicorns: Can Paying for Performance make Quality Competition Routine?" Journal of Health Politics, Policy & Law vol. 31 no.3, pp. 531-56.

Schneller, E, and Smeltzer, L, 2066 Strategic management of the health care supply chain. San Francisco, CA: Jossey-Bass.

Sinha, K, and Kohnke, E, 2009 "Health Care Supply Chain Design: Toward Linking the Development and Delivery of Care Globally." Decision Sciences vol. 40, no. 2, pp.197-212.

Yeung, A, 2008 "Strategic Supply Management, Quality Initiatives, and Organizational Performance." Journal of Operations Management vol. 26, no .4, pp. 490- 502.

The World Health Report 2011: Reducing Risks, Promoting Healthy Life.