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Stakeholder Analysis Framework for IT Enabled Healthcare Outsourcing: Critical Success Factors

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ABSTRACT

In the past decade, we have seen that information technology (IT) played an important role as an enabler for healthcare outsourcing. Healthcare services at various levels (support, clinical, etc.) are now being outsourced to countries such as India, Philippines and China. While IT outsourcing is at an all time high, healthcare outsourcing has been slowly and steadily increasing. However, there is no clear document in the literature that actually explains what is really going on in healthcare outsourcing. The purpose of this paper is to provide a current picture of healthcare outsourcing while focusing on the role of IT as an enabler. We develop and present a framework that helps stakeholders to understand the opportunities, critical success factors (CSFs), threats, and weaknesses of the business model that drives IT-based healthcare services offshore.

Keywords

Healthcare outsourcing, information technology, healthcare offshoring

INTRODUCTION

The rise of open technology standards, including the ubiquity of the Internet, the advancements of broadband telecommunications, and the emergence of economies of expertise in industry process and engineering extended the IT Outsourcing model higher in the value chain than just managing IT infrastructure to business process outsourcing. Today, business process outsourcing, being viewed as low-end tasks with low risks to corporations, is evolving toward knowledge process outsourcing in which higher value service tasks performed by highly skilled workers with advanced degrees in science, engineering, finance, medicine and law are being outsourced. Healthcare providers and medical organizations that strive to provide the best possible healthcare to their customers and patients at the most affordable cost are now considering new opportunities in outsourcing.

Outsourcing can be effective in realizing business value, decreasing operational costs and improving efficiency, improving time-to-market and customer responsiveness, improving flexibility and adaptability to changing market dynamics, enabling access to critical skills and reallocation of resources dynamically, improving processes and standardization, and finally improving competitiveness. The increasing percentage of older adults, combined with governmental healthcare shortfalls and the rising cost of specialized health procedures, is placing an enormous economic strain on the developed countries' healthcare industry. Therefore, cost savings and other improvements that can be gained by outsourcing business and knowledge processes besides non core competencies is becoming an important driver in healthcare outsourcing. However, in today's global environment, offshore outsourcing exposes medical organizations to various risks in host countries.

In this paper, we will outline the current state of healthcare outsourcing and the role of information technology (IT) as an enabler for offshore healthcare outsourcing. Later, we will present an analysis of critical success factors (CSFs) for existing offshore outsourcing practices that are reported in the literature. These CSFs are based on a literature review as opposed to data collected directly from stakeholders as outline by (Bullen and Rockart 1981) and (Rockart 1980). Finally, we will introduce a framework for healthcare outsourcing which can also be used to develop metrics that can guide outsourcing decisions.

CURRENT STATE OF HEALTHCARE OUTSOURCING: PRIMARY STAKEHOLDERS

The healthcare stakeholders can be primarily divided into five major blocks. Healthcare providers (hospitals and physician groups), healthcare payers (healthcare insurance companies, third party administration, etc), healthcare policy makers, and healthcare consumers are four commonly listed stakeholders in healthcare industry. We also include biotechnology and pharmaceutical companies (clinical research and bulk drug outsourcing) as the fifth stakeholder group in healthcare outsourcing market since they represent an industry that is an allied part of the healthcare outsourcing market. In each of the following categories, IT and the Internet are used to either completely carry out the outsourcing as in the case of knowledge work, or it is used as a means of facilitating work that is physically carried out elsewhere.

Healthcare Providers

The issue of healthcare outsourcing has presented a double-edged sword for healthcare providers. On the one hand initial implementations of telemedicine have been seen as a boon to underserved areas who are unable to obtain access to specialists (Blouin and Brent 1999; Hilty Yellowlees Cobb Bourgeois Neufeld and Nesbitt 2006). Twenty-four hour access to radiologists has already created a thriving teleradiology market in a practice dubbed “night hawking” to emphasize the time zone advantage between India and the US (Press 2004). This has been seen as a boon to overworked US providers as well as filling personnel shortages. Teleradiology has been cited as a platform to directly link costs and profits in healthcare with a proposal for “pay for performance” radiology (McVey 1999). Teleradiology has not been without its detractors, with patient advocacy groups calling for more oversight and accountability for offshore radiology interpretation. In some cases, US physicians have attributed offshore interpretations as their own, prompting the American College of Radiology to issue a statement regarding unethical or fraudulent attribution of exams performed offshore (ACR 2006).

There is some indication in the literature that the managerial focus in healthcare has overemphasized developing higher levels of sophistication in healthcare while neglecting enablement of simpler, more cost effective treatment modalities (Christensen Bohmer and Kenagy 2004). The strategies of large healthcare providers has been criticized for attempting to offer as many services as possible, with the net result being service delivery below prevailing medical standards (Porter and Teisberg 2004). Other managerial issues include the phenomenon of international “brain drain” – the recruitment of physicians from developing countries into more lucrative markets (Ehman and Sullivan 2001; Pang 2002). Traditionally, this involved physical relocation but now the process can be expedited by remote knowledge transfer via offshoring.

Healthcare Payers

Payers can represent two facets of outsourcing both as partners in outsourcing business services to support their own functions and as gatekeepers of outsourcing practices. Payers can hold an authoritative role in knowledge process outsourcing (KPO) by allowing or refuting reimbursement claims for patients seeking services of outsourcing providers. For example, Canadian patients can get 75% of their expenses reimbursed after treatment in India. On the other hand, the NHS does not fund British patients because the flying time to India exceeds recommended patient transportation times (Mudur 2004).

As business partners, payers may chose to outsource their back office processes for cost cutting and leveraging global worker availability. Functions for outsourcing can range from non-core business processes to healthcare insurance claims processing. Outsourcing arrangements have been used to develop workflow solutions, standardizing rule based claims adjudication and developing knowledge management best practices. Improving basic business practices can include accounts payable practices, payment validation and streamlining the approval process (Namasivayam 2004).

Policy Makers

Policy makers face difficult decisions for governing healthcare outsourcing. The current lack of studies supporting evidence based outcomes for more established processes such as e-health and even conventionally practiced medicine compounds this problem (Carey 2006; Gagnon and Scott 2005). While the subject of security for e-health transactions has been explored, questions have been raised regarding practice standards such as quality of service and ethics in technology based environments (Marziali Serafini and McCleary 2005). The United States General Accountability Office (GAO) has issued a report highlighting the lack of comprehensive and uniform privacy protections needed for a national health information infrastructure that is needed with the plan to expand electronic health record (EHR) use nationwide. Although HIPAA does define certain protections there is a lack of a comprehensive approach to be applied nationally (Koontz 2007). A recent report by the World Privacy Forum highlights the lack of legal protections for health information when the information is not being handled by a HIPAA covered entity (Gellman 2008). The latter discussion refers to protecting information within US borders. Clearly, the legal complexity and presumably problems with enforceability are compounded in the face of offshore

outsourcing. These issues will remain a significant threat until policy makers can develop international level accountability and enforceability.

The potential to conduct global clinical trials could provide a great deal of valuable data gathered from diverse population samples. There are currently no international level organizations to hold providers accountable for health information or services provided using information technology (Rettig 2000). Regulating the protocols for the protection of research subjects for transcontinental studies presents cultural, political as well as logistic problems. For example, where will the Institutional Review Board (IRB) committees reside? One suggestion has been to create centrally located IRBs. This still presents problems as to where best to locate them to avoid the effects of political influences and maintain their independence (Rettig 2000). Such IRBs ability to make binding decisions over researchers is still questionable.

Patent protections are also of concern the pharmacological/biomedical industries seeking to outsource research and development processes. If these industries seek competitive advantage through outsourcing intellectual processes, they run the same risks as previously seen in software and other industries. The full spectrum of legal implications for healthcare outsourcing is beyond the scope of this paper; however, it is hoped that legal experts will contribute to this framework. All of the above scenarios are enabled by the use of IT to gather data, collaborate on analytical results and transfer the results across the globe. Just as policy makers have faced the difficulties of prosecuting perpetrators of Internet Viruses and remote cyber crimes, they will also be required to set legal precedent and establish courts of jurisdiction to protect offshored health information.

There is also the potential for healthcare employees to mimic corporate level outsourcing practices on the personal level; that is, they might outsource their own knowledge based jobs. This could take the form of outsourcing consulting and other professional knowledge tasks (Obal 2006). This could create an entire unregulated underground market designed to circumvent attempts at international regulation.

Healthcare Consumers

Healthcare outsourcing offers patients a myriad of new consumer choices, opportunities and risks. These new resources may be initiated actively by the patient or passively as the result of healthcare providers utilizing outsourcing. Active involvement may include medical tourism. Patients seeking non-traditional physician arrangements will either receive referrals from domestic physicians or be required to self-educate themselves on treatment options and logistics of offshore medical treatment. Currently there are commercial portals for medical tourism as a response to growing demand. Presumably this will also fuel a need for the complementary services of reliable on-line medical information resources and healthcare decision making such as those developed by Berndt et al. (2003). The complexity of ensuring medical accountability across borders indicates the need for input from legal experts to facilitate and protect healthcare consumer interests.

Passive patient involvement includes receiving outsourced healthcare services such as knowledge based services such as teleradiology/consulting or the indirect effects healthcare support process outsourcing. In such cases, the issue of informed consent and protection safeguards will be the responsibility of healthcare providers and legislators.

Secondary Stakeholders

Biotechnology and Pharmaceutical Companies

More so than other healthcare entities, the pharmacological industry has probably maintained a more business focused awareness of the drive to outsource. The industry is acutely aware of issues regarding speed to market and the costs of delayed data (Marais 2000). While outsourced clinical trials are an attractive way to test larger and more diverse patient populations, it can be difficult in some jurisdictions to protect the data and therefore stave off generic competition (Jayaraman 2004). The disappearance of former competitive barriers may force a new emphasis for global strategies including interactive information sharing as well as global R&D and marketing (Gomeni 2000). Employers will face new challenges in attempting to manage globally dispersed providers who have different work practices and cultural values.

China has become attractive for outsourcing clinical trials due to low costs and the ease of access to patients (Jia 2005). Potentially, valuable data bases can be developed from vast, clinical trials; however, problems have been cited with data standardization for trials in China (Jia 2005). Similarly, outsourced trials in India present data collection problems due to a lack of a centralized database listing all trials underway (Padma 2005). The literature indicates a group of forces driving the outsourcing of clinical trials as a move toward the industrialization of clinical research (Rettig 2000):

- Marketplace globalization on drug prices
- The need to escape current limits of organizational capacity
- Industry consolidation to manage costs, reduce jobs, centralize R&D and outsourcing to reduce fixed costs
- Firms with great competence may lack internal resources to conduct pre-clinical and clinical research
- The need to seek regulatory approval in different national markets simultaneously
- Clinical Research Organizations (CRO) s with particular expertise becomes attractive.

HEALTHCARE OUTSOURCING FRAMEWORK

A review of the literature and news articles on current trends in healthcare outsourcing suggests the aggregation of healthcare outsourcing into three major classifications: Healthcare Knowledge Process Outsourcing (HKPO), Healthcare Business Process Outsourcing (HBPO) and Healthcare Infrastructure Process Outsourcing (HIPO) which includes the outsourcing of the IT processes that support healthcare. Each of these categories will be discussed individually after our discussion on drivers of healthcare outsourcing and our framework development methodology.

Drivers of Healthcare Outsourcing and the Role of IT as an Enabler

In order to develop a framework for measuring healthcare outsourcing criteria, it was necessary to examine the forces driving the evolution of outsourcing. The outsourcing literature lists reasons including strategic impact (opportunities), operational efficiency (industrialization, commoditization of processes) and tactical support (need expertise) (Smith and McKeen 2004). For example, the literature has illustrated a reluctance of the pharmaceutical industry to employ new technologies due to a previous absence of competitive pressure (Gomeni 2000). Similarly, lack of competition has been blamed for failures in healthcare outcomes, despite increased spending (Porter et al. 2004). These drivers are not necessarily mutually exclusive and have been summarized in Figure 1.

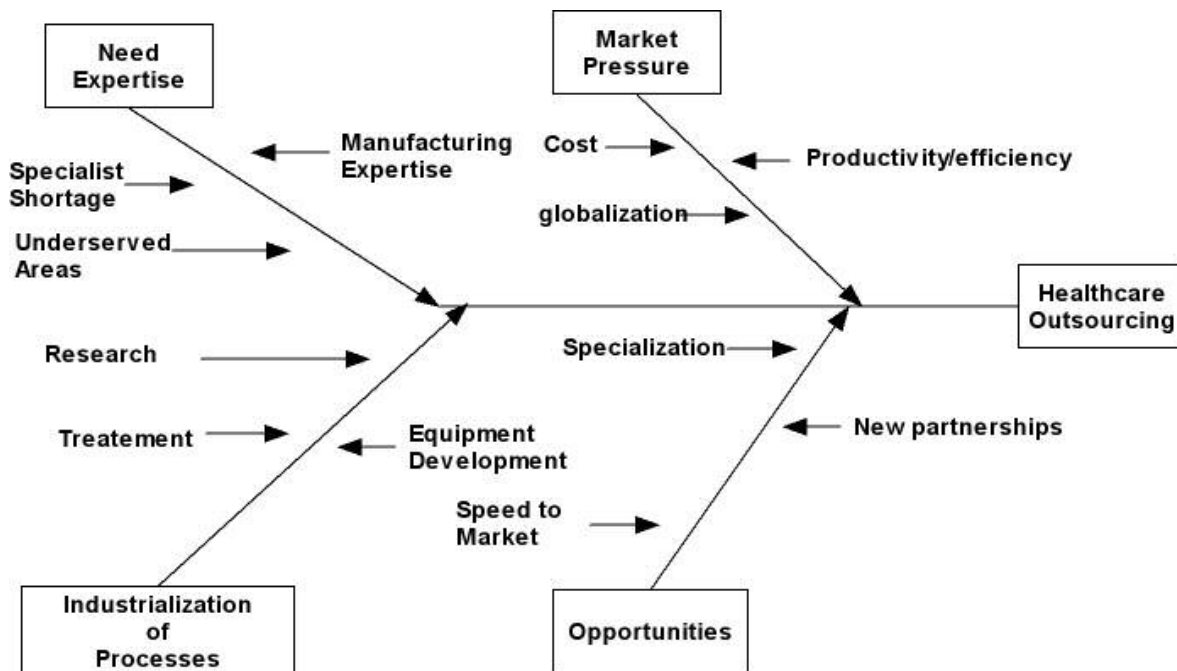


Figure 1: Forces Driving Healthcare Outsourcing

Each set of factors may use IT to support the outsourcing process in its various manifestations. Needs expertise/tactical support may involve a telemedicine approach. In cases where medical specialists are not available or difficult to obtain for consultation, medical data including digital imaging can be readily exchanged across the globe. This method has already been widely discussed for IT functions (Smith et al. 2004), that may in turn support healthcare operations, and includes help desk/technical support and even IT security support for healthcare systems (Rosenthal 2005).

Operational efficiency/industrialization of processes driven by the need for cost reduction may include the concept of “fee for service” (Smith et al. 2004) and has been suggested in the area of radiology (McVey 1999). The digitization of radiology images now makes it possible. Similarly, offshore locations that develop expertise in pharmaceutical or medical device development are able to conduct clinical trials and development when local initiatives are insufficient.

Market pressure/strategic impact in the IT outsourcing literature includes opportunities for new alliances and speed to market (Smith et al. 2004) which in turn are driven by market pressures. Similar thoughts have been expressed on using disruptive innovation to address problems in healthcare delivery (Leung Yeung Wong Castan-Cameo and Johnston 2006) (Christensen et al. 2004). This could include offering hands on medical procedures globally via medical tourism which in turn drives specialization and efficiency for offshore providers and the creation of new partnerships to facilitate these arrangements (Mudur 2004; Times 2006). The healthcare consumer then chooses a provider through a web portal or other “patient shipping” initiative (Motta et al., 2003).

Development of the Framework

The literature review served as the foundation for the following healthcare outsourcing framework which in turn, may serve as a guide for discussion and trans-disciplinary research (See Figure 2). The healthcare domain was divided into three functional areas: knowledge processes, business processes and infrastructure - which includes IT as an enabler of its own outsourcing. Each grouping has similar functional issues. For example, the infrastructure processes are concerned with IT support functions for healthcare that can be outsourced. Business processes also support healthcare and there is already an extensive outsourcing literature devoted to this area. Health knowledge process outsourcing is a newer entrant to the outsourcing literature and has unique and innovative issues.

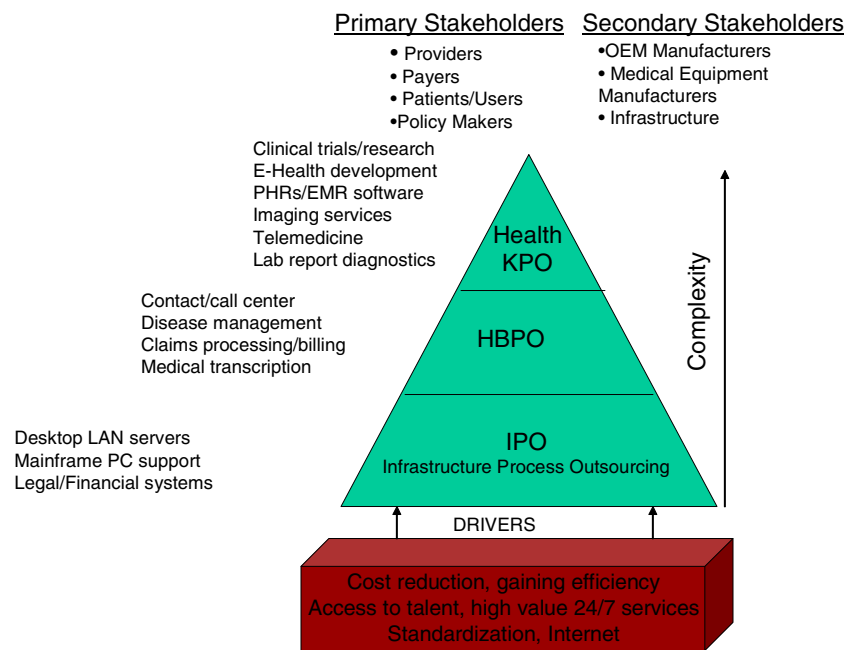


Figure 2: A Healthcare Outsourcing Framework

Each level of the pyramid reflects an ascending level of complexity of the outsourcing process. Basic IT functions (HIPO) such as software coding for healthcare applications has been fairly well defined in the literature and has a further degree of separation from the higher level of processes it supports. The business process level (HBPO) brings additional complexity and links the participants at both the upper and lower end of the framework. Healthcare knowledge (HKPO) marks the apex due to the high levels of training and resources required to provide these services. Collectively, the drivers listed and described from Figure 1 are summarized at the base of the pyramid. IT as an enabling function is implicitly assumed present at each level of the framework.

Healthcare Information Process Outsourcing

Not surprisingly, healthcare Infrastructure process outsourcing mirrors other industry trends in IT outsourcing. That is, healthcare IT processes themselves may be outsourced. This may prove to be proportional to the degree with which an organization has adopted Electronic Healthcare Records (EHRs). For example, Lorence and Spink (2004) found indications that greater external support was needed for more EHR dependent environments driven by the need for greater technology based management (Lorence and Spink 2004). There is additional evidence for this phenomenon in studies describing technical support for hospitals that is being outsourced. However, not without controversy over privacy and HIPAA compliance (Gao Shiwaku Fukushima Isobe and Yamane 1999; Gellman 2008; Koontz 2007; Lazarus 2003). The fine balancing act between health information access and privacy protection as required by HIPAA has driven some hospitals to outsource their security due to the inability to manage it in-house, both technically and financially (Rosenthal 2005).

A survey of healthcare IT managers by Lorence and Spink (2004) indicated a counterintuitive preference for outsourcing privacy sensitive information functions, such as transcription, microfilming, record release, microfilming and record release over less privacy critical functions such as Health Information Management (HIM) services and management. In addition they found factors influencing the healthcare IT outsourcing decision to include:

- Level of comfort/fear of regulators or accrediting agencies
- Improve patient care
- Save money in the long run/keep up with competitors
- Availability of trained staff/availability of space

In view of these findings, it may be useful to pay additional attention to the IT security requirements and assurances necessary to support outsourcing of privacy sensitive information and processes. (Lorence et al. 2004)

Healthcare Business Process Outsourcing – HBPO

As with other specialized types of services, healthcare delivery depends upon supporting business processes. Many of these processes such as accounts receivable, maintenance of client records and insurance claims processing are very similar to their non-healthcare counterparts including being in digital form and hence being feasible for offshore outsourcing. For example, the presence of a strong IT infrastructure has been associated with an increased likelihood of outsourcing both onshore and offshore (Whitaker Mithas and Krishnan 2005). Strong IT infrastructure coupled with a strong knowledge of a business process and the ability to modularize and standardize business processes also make stronger candidates for business process outsourcing (Whitaker et al. 2005). HIPAA has been cited as enabling the commoditization of claims processing through electronic data interchange mandates (Goldsmith 2000). In some cases there is a drive toward increased web distribution of insurance services including direct marketing to subscribers including the ability to “mass customize services” for consumers and creating new opportunities in risk pool management (Goldsmith 2000). The need to maintain legal compliance and be pro-active against possible lawsuits has created an incentive to outsource medical legal services (Blouin et al. 1999).

The technical feasibility to outsource HBPO is not the only driving factor. The Inpatient Prospective Payment System (IPPS) was mandated by the Tax Equity and Fiscal Responsibility Act (TERFA) was a direct response to the need to control healthcare costs (Ferenc 2006). Firms with cost cutting strategies have been found to have a higher association with business process outsourcing than those with revenue generating strategies (Whitaker et al. 2005). With the preceding factors in mind, the following serve as examples of HBPO found in the literature:

- Medical records transcription and Coding (Bikman and Whiting 2007; Wood 2007)
- Claims data entry and adjudication (Goldsmith 2000; Robinson and Kalakota 2004)
- Healthcare services: patient scheduling, Accounts Receivable (Robinson et al. 2004)
- Insurance benefits management, risk pool management (Goldsmith 2000)

Although some of the literature classifies healthcare IT as a business process, it is kept as a separate entity in this framework. The general consensus in the literature appears to follow in line with general outsourcing rationale – if it is not a core competency, then it is fair game for outsourcing (Namasivayam 2004).

Healthcare Knowledge Process Outsourcing - HKPO

One of the most revolutionary aspects of healthcare outsourcing is occurring in the Knowledge Process Outsourcing segment. This is probably the most direct threat to the traditional practice of local medicine and ranges in scope from outsourcing

diagnostic interpretations and research to actual hands on medical care including surgery. Various forms of “telemedicine” have been reviewed in the literature including outpatient psychiatry (Hilty et al. 2006).

The digitization of radiology made it one of the earliest candidates for outsourcing. While “night hawking” radiology offshore was cited as a means of dealing with 24/7 coverage, the practice also instigated the controversies over offshore medical work being performed by non-US certified personnel which continues to this day (Wachter 2006). Besides meeting staffing shortages and making efficient use of scarce resources (Rockart 1979), the cost benefits of outsourcing radiology have been explored as a pay per performance function (McVey 1999). Other examples of direct medical knowledge outsourcing include consults and remote monitoring of ICU patients (Mullaney 2006). Offshoring radiology and ICU monitoring reflect “environmental” issues such as time differences that are normally uncontrollable (Bullen et al. 1981) which are now a source of improving service quality and functional advantage.

Physician shortages may be fueling a type of global arbitrage for medical care. The more traditional model involves the “brain drain” effect wherein physicians from lower-wage or politically unstable locations are lured to more lucrative and stable countries (Spurgeon 2001). More recently, medical tourism has been used to deal with long waiting periods for medical procedures, particularly in countries with national/universal health coverage such as Canada and the UK. Legitimization of the practice is coming in the form of reimbursement incentives from healthcare payers. The Canadian government offers citizens up to 75% reimbursement for traveling abroad for care (Mudur 2004). Work has been done in the UK to write software to manage the logistics of “patient shipping” to Eastern Europe which even includes a currency converter (Motta Domingue Cabral and Gaspari 2003). Medical tourism is also being used by un/under-insured Americans to obtain otherwise unaffordable healthcare. This has not gone unnoticed by US healthcare insurers who are beginning to create plans providing for emergency care at home and deferred procedures abroad (Kher 2006). A new industry has emerged to facilitate these arrangements making use of web portals to help guide patients to potential providers and even arrange for complete travel packages.

Medical research and clinical trials have also seen growth in outsourcing. India is an attractive site for clinical trials due to the large, diverse population that is largely “treatment naïve” – not taking medications for their conditions that could influence experimental results (Slater 2004). Trials can get done faster and at a cheaper cost in India (Brower 2004; Padma 2005). As with other more traditional types of business outsourcing, digital data and broadband connections bridges the gap between parent companies and their offshore research subsidiaries.

CRITICAL SUCCESS FACTORS FOR HEALTHCARE OUTSOURCING

Because healthcare outsourcing is a newer entrant to the offshore outsourcing domain, there is a lack of literature defining and measuring salient criteria for outsourcing success. CSF research by Bullen and Rockert (1981) outlined the case study methodology for determining relevant CSFs (Bullen et al. 1981). However, alternative methods for CSF determination have been identified including action research, Delphi technique, scenario analysis, multivariate analysis and literature review (Amberg Fischl and Weiner 2005). In addition, there has been some criticism of the limited scope of the single case study to define CSFs and the suggestion to widen the scope of study to take in contextual aspects of the situation (Esteves and Pastor 2001). The argument has been made that by collecting data from different sources, a wider range and fuller picture may be obtained (Bonoma 1985; Esteves et al. 2001). Therefore, the literature review approach was used to develop foundation factors upon which to build a healthcare outsourcing framework. This is in keeping with the initial goals of data collection for this framework which are classification and theory development (Bonoma 1985). There is currently a developing literature on success factors for business process outsourcing (BPO) and IT outsourcing which may be incorporated into the healthcare outsourcing framework. A fundamental problem with determining the critical factors for outsourcing success is the lack of consensus in the literature on nomenclature for the factors and lack of a uniform ranking or measurement criteria. Nonetheless, certain general commonalities arise and these were grouped for comparison (See table 1-4).

Stakeholders	Critical Success Factors Categories	Critical Success Factor described in literature	References
Issues for Providers	Contracts and Agreements	Service Level Agreement (SLA) quality	(Yoon and Im 2005)
		Contractual Completeness	(Gottschalk and Solli-Saether 2005)
		Legal System – accountability, contract enforceability, government regulation	(Padma 2005),(Jayaraman 2004),(Ulfelder 2003),(Mooradian 1976)
	Customer Maintenance	Supporting Service Quality – Customer care, management, maintenance & education	(Yoon et al. 2005)
		Infrastructure – physical, telecommunications, efficiency of operations	(Jayaraman 2004),(Padma 2005), (Gao et al. 1999),(Jia 2005),(Government 2000-2006),(Mooradian 1976; Rao 2004)
		Customer Satisfaction – reduced waiting times, more services	(Kher 2006),(Mudur 2004),
	Ethical Considerations	Honoring agreements, avoiding lying, respecting autonomy of others, avoiding harm to others	(Gottschalk et al. 2005)
	Quality Assurance	Best practices, systematization, standardization	(Yoon et al. 2005)
		Availability of Trained Professionals	(Jayaraman 2004)
		Success Rates – Patient Outcomes (Medical Tourism factor)	(Mudur 2004) (Blendon Schoen Donelan Osborn DesRoches Scoles Davis Binns and Zapert 2001) (Pang 2002) (Ehman et al. 2001)

Table 1. Critical Success Factors Relevant to Healthcare Outsourcing Stakeholders - Providers

Stakeholders	Critical Success Factors Categories	Critical Success Factor described in literature	References
Issues for Consumers	Core competence management	Defining what should be outsourced	(Gottschalk et al. 2005)
		Provision of hands-on medical services (Medical Tourism) Reduced waiting times a driving factor	(Mudur 2004), (Kher 2006), (Motta et al. 2003)
	Cost	Reducing labor costs	(Gottschalk et al. 2005), (Mudur 2004), (Ulfelder 2003)
	Managerial effectiveness	Effective human capital management	(Koh Ang and Straub 2004)
		Language, Culture	(Jayaraman 2004), (CIA 2007), (Ulfelder 2003)
	Organizational Considerations	Clear authority structures, taking charge;	(Koh et al. 2004)
		Response Levels & Time Zone Advantages	(Wachter 2006), (Gencer 2006), (Ulfelder 2003)

Table 2. Critical Success Factors Relevant to Healthcare Outsourcing Stakeholders – Consumers

Stakeholders	Critical Success Factors Categories	Critical Success Factor described in literature	References
Issues for Payers (outsourcing administrative and medical functions)	Cost Savings	Substantial cost differences , improved cost accounting, malpractice insurance events	(Einhorn 2008), (Moschuris and Kondylis 2007), (Rockart 1979), (Kher 2006), (Mooradian 1976), (Rockart 1979)
	Patient Satisfaction	Willingness to travel, reduced waiting times	(Patiar Lo Duvvi and Spraggs 2006), (Leung et al. 2006), (Moschuris et al. 2007)
	Customization	Specialty Care	(Moschuris et al. 2007), (Trimmer Pumphrey and Wiggins 2002)
	Coordination & Integration	Coordinate services between payer and providers –“patient shipping”	(Moschuris et al. 2007), (Motta et al. 2003)

Table 3. Critical Success Factors Relevant to Healthcare Outsourcing Stakeholders – Payers

Stakeholders	Critical Success Factors Categories	Critical Success Factor described in literature	References
Issues for Policy Makers and Regulators	Healthcare Specific Regulations	Compliant/ Enforceable (Ex: HIPAA)	(Gellman 2008)
	Ethical Considerations	Managing Protection of human subjects at the international level	(Rettig, 2000)
	Federal Funding	Government health payers endorse medical tourism	(Mudur 2004)

Table 4. Critical Success Factors Relevant to Healthcare Outsourcing Stakeholders- Policy makers and Regulators

This general literature review sample was used as a foundation for generating a critical success factors table to incorporate factors relevant to healthcare outsourcing. This involved the refocusing of general critical success factors and the inclusion of international locations in the description of outsourcing factors.

The unique nature of healthcare provision necessitated the inclusion of patient success as a quality assurance measure. The gold standard for outsourcing of direct health services such as telemedicine, consulting/diagnostics, medical tourism and clinical trials/research will be an evaluation of patient outcomes. This metric can be provided by Evidence Based Medicine (EBM) which is not only a metric but an emerging force for clinical practice (Sackett Rosenberg Gray and Richardson 1996). This table is intended as a guideline and it is expected that there will be some overlap in critical success factors between outsourcing providers and customers.

DISCUSSION

This paper addresses a gap in the literature on outsourcing by identifying the drivers, participants, critical success factors and issues unique to IT enabled healthcare outsourcing. Existing outsourcing factors and theories were identified and used as a basis for a new framework to address issues unique to outsourcing healthcare services. It has been suggested by Christensen et al. that the entrenched nature of healthcare may require truly disruptive innovations to renovate the current broken business models and create a more effective focus of resources (Christensen et al. 2004). The forces driving changes in healthcare processes can funnel through IT barriers & IT enabling technology to create new opportunities, strategies & dimensions of competition (See Figure 3).

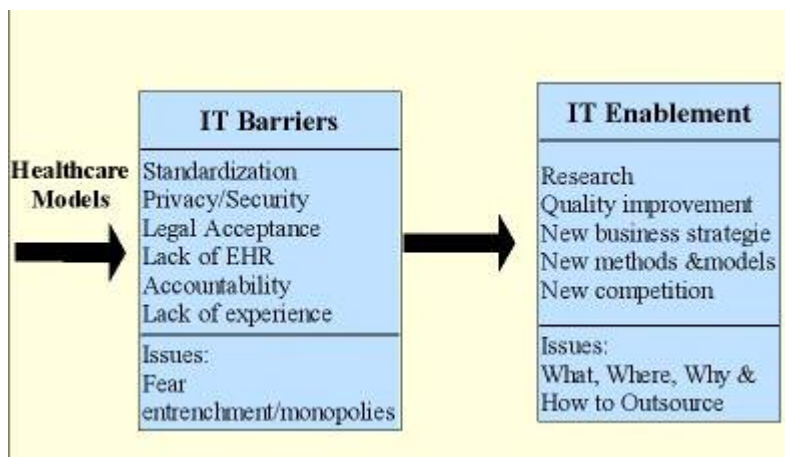


Figure 3: IT factors and effects on healthcare outsourcing

There is still much work to be done in healthcare outsourcing research. The general outsourcing literature does not use standardized nomenclature or metrics in framework development. This makes it difficult to develop a rigorous basis for measuring critical success factors and defining consistent units of measurement. Measurements for healthcare outsourcing success are only recently being put into place. For example, there has been controversy within the medical community regarding a lack of understanding of why generally accepted treatments are used (Carey 2006). Similar complaints have prompted a drive toward evidence based medicine (EBM), which of itself, faces hurdles to implementation and adoption (Lockwood Armstrong and Grant 2004; Tomlin Humphrey and Rogers 1999). There has been some work done on creating consumer databases for assessing quality of care and high volume providers within traditional, local healthcare delivery systems (Berndt Hevner and Studnicki 2003; Studnicki Berndt Luther and Fisher 2004). Continuing work on EBM and data analysis on provider outcomes would be invaluable for developing consumer guides to offshore healthcare providers.

The goal of this research has been to identify the main participants and factors that need to be addressed in a uniform way in the literature. For the purpose of building a framework, an industry level view was used rather than the general manager view (Bullen et al. 1981). This work also differs from previous CSF work as done by Rockert (1979) and Mooradian (1976) in that the focus is on stakeholder outsourcing relationships rather than on discrete healthcare entities such as individual hospitals and clinics. This framework can be used to facilitate the development of a more standardized research terminology and subsequent rigor in success measurements. It can also serve as a guideline for further refinement of healthcare outsourcing planning and design for IT systems to support outsourcing functions. As IT continues to erase barriers to knowledge, business and technology support outsourcing, it is expected that further aspects of healthcare may be outsourced. The development of a common basis for measuring these issues and their effects will facilitate discussion and analysis.

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