

# Chapter XX

## The Competitive Forces Facing E-Health

**Nilmini Wickramasinghe**

*Stuart Graduate School of Business, USA*

**Santosh Misra**

*Cleveland State University, USA*

**Arnold Jenkins**

*Johns Hopkins Hospital, USA*

**Douglas R. Vogel**

*City University of Hong Kong, China*

### ABSTRACT

*Superior access, quality and value of healthcare services has become a national priority for healthcare to combat the exponentially increasing costs of healthcare expenditure. E-Health in its many forms and possibilities appears to offer a panacea for facilitating the necessary transformation for healthcare. While a plethora of e-health initiatives keep mushrooming both nationally and globally, there exists to date no unified system to evaluate these respective initiatives and assess their relative strengths and deficiencies in realizing superior access, quality and value of healthcare services. Our research serves to address this void. This is done by focusing on the following three key components: 1) understanding the web of players (regulators, payers, providers, healthcare organizations, suppliers and last but not least patients) and how e-health can modify the interactions between these players as well as create added value healthcare services. 2) understand the competitive forces facing e-health organizations and the role of the Internet in modifying these forces, and 3) from analyzing the web of players combined with the competitive forces for e-health organizations we develop a framework that serves to identify the key forces facing an e-health and suggestions of how such an organization can structure itself to be e-health prepared.*

## **INTRODUCTION**

E-health is a broad term that encompasses many different activities related to the use of the Internet for the delivery of healthcare service. Healthcare professionals are extending the use of the Internet to include a source of evidence-based consumer information as well as to facilitate the research of protocols for healthcare delivery, accessing laboratory and medical records, and performing second opinion consults (Sharma and Wickramasinghe, 2004; Sharma et al., 2006). Moreover, the Internet is being used by patients to become more knowledgeable about health practices as seen from their questions to their physicians (Gargeya and Sorrell, 2004).

Although, a relatively new term and unheard of prior to 1999, e-health has now become the latest “e-buzzword,” used to characterize not only “Internet medicine”, but also virtually everything related to computers and medicine (Sharma et al, 2006; von Lubitz and Wickramasinghe, 2006). The scope and boundary of e-health, as well as e-health organizations, is still evolving. However one can only imagine it will grow rapidly especially given that governments in both US and Europe, and organizations such as WHO (World Healthcare Organization) are advocating that e-health be on the top of all healthcare agendas and an integral component of any healthcare delivery initiative (von Lubitz and Wickramasinghe, 2006).

Given the growth and variety of e-health initiatives, it becomes important to examine the forces affecting these initiatives and factors leading to the success of e-health. To date, little research examines metrics of measurement pertaining to e-health initiatives or their economic value. What are the forces of competition affecting e-health? Are the competitive forces constrained by external considerations? Is the issue of competition an appropriate concern for e-health? If so, what are the strong and weak competitive forces? We argue that analysis of these forces would lead us

to understand the long-term sustainability of any e-health initiative.

## **TRADITIONAL COMPETITIVE FORCES**

The starting point for understanding the competitive forces facing any e-health initiative lies in understanding the fundamentals of traditional competitive forces that impact all industries and then how the Internet as a disruptive technology has impacted these forces.

The strategy of an organization has two major components (Henderson and Venkatraman, 1993). These are 1) formulation – making decisions regarding the mission, goals and objectives of the organization and 2) implementation – making decisions regarding how the organization can structure itself to realize its goal and carryout specific activities. For today’s healthcare organizations the goals, mission and objectives all focus around access, quality and value and realizing this value proposition for healthcare then becomes the key (Wickramasinghe, N. et al, 2004). Essentially, the goal of strategic management is to find a “fit” between the organization and its environment that maximizes its performance (Hofer, 1975). This then describes the Market-based view of the firm and has been predominantly developed and pushed by the frameworks of Michael Porter. The first of Porter’s famous frameworks is the generic strategies (Porter, 1980).

The use of technology must always enable or enhance the businesses objectives and strategies of the organization. This is particularly true for 21<sup>st</sup> Century organizations where many of their key operations and functions are so heavily reliant on technology and the demand for information and knowledge is so critical. A firms’ relative competitive position i.e., its ability to perform above or below the industry average is determined by its competitive advantage. Porter (1980) identified 3

12 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/competitive-forces-facing-health/26200](http://www.igi-global.com/chapter/competitive-forces-facing-health/26200)

## Related Content

---

### Telenursing: Nursing Informatics in Practice

Sisira Edirippulige (2011). *Evidence-Based Practice in Nursing Informatics: Concepts and Applications* (pp. 150-161).

[www.irma-international.org/chapter/telenursing-nursing-informatics-practice/48929](http://www.irma-international.org/chapter/telenursing-nursing-informatics-practice/48929)

### Electronic Information Sources for Women's Health Knowledge for Professionals

Shona Kirtley (2009). *Medical Informatics in Obstetrics and Gynecology* (pp. 278-301).

[www.irma-international.org/chapter/electronic-information-sources-women-health/26194](http://www.irma-international.org/chapter/electronic-information-sources-women-health/26194)

### Outcomes Research in Hydrocephalus Treatment

Damien Wilburn (2010). *Cases on Health Outcomes and Clinical Data Mining: Studies and Frameworks* (pp. 225-244).

[www.irma-international.org/chapter/outcomes-research-hydrocephalus-treatment/41571](http://www.irma-international.org/chapter/outcomes-research-hydrocephalus-treatment/41571)

### Simulations to Assess Medication Administration Systems

Elizabeth M. Borycki, Andre W. Kushniruk, Shigeki Kuwata and Hiromi Watanabe (2009). *Nursing and Clinical Informatics: Socio-Technical Approaches* (pp. 144-159).

[www.irma-international.org/chapter/simulations-assess-medication-administration-systems/27328](http://www.irma-international.org/chapter/simulations-assess-medication-administration-systems/27328)

### Picture Archiving and Communication System for Public Healthcare

Carrison K.S. Tong and Eric T.T. Wong (2011). *Clinical Technologies: Concepts, Methodologies, Tools and Applications* (pp. 2173-2182).

[www.irma-international.org/chapter/picture-archiving-communication-system-public/53705](http://www.irma-international.org/chapter/picture-archiving-communication-system-public/53705)