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Attaining Competitive Advantage: The Impact of Using Online Communication Strategies for Healthcare Organizations

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ATTAINING COMPETITIVE ADVANTAGE: THE IMPACT OF USING ONLINE COMMUNICATION STRATEGIES FOR HEALTHCARE ORGANIZATIONS

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APPROVAL PAGE

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TABLE OF CONTENTS

PAGE

PAGE

CHAPTER I

INTRODUCTION

As patients have become more educated about healthcare needs, products, and services, they have become more assertive in researching and demanding information about those topics (Advisory Board Company, 2007, 2008). With a rapidly growing number of internet sites dedicated to helping patients find information they need to make decisions about health care, the internet has become a leading communication medium used by the healthcare industry. The continued use of online strategies to provide patient healthcare is anticipated, and while concerns about privacy and quality of internet-based information and communication still exist, the internet has become an efficient tool to disperse information, enhance communication, and offer greater accessibility to health care (Baker, Rideout, Gertler, & Raube, 2005). Patients have begun to associate the quality of health services to the credibility and usability of online applications (Baker, Rideout, Gertler, & Raube, 2005; Advisory Board Company, 2007, 2008). Thus, to gain competitive advantage, healthcare leaders must understand this growth of online health research and implement effective strategies that satisfy patient demands.

STATEMENT OF THE PROBLEM

The problem of this study was to determine if there is a competitive advantage for healthcare organizations which implement effective online communication strategies for their patients.

RESEARCH GOALS

The research questions for this study will be:

RQ 1. Do patients prefer to seek medical attention from healthcare organizations that have implemented online communication strategies?

RQ 2. Are patients who seek medical attention from healthcare organizations that have implemented online communication strategies more satisfied with their treatment experience?

RQ 3. What recommendations can be made to improve online patient communication with health care providers?

BACKGROUND AND SIGNIFICANCE

The "internet represents one of the most successful examples of the benefits of sustained investment and commitment to research and development of information infrastructure" (A Brief History of the Internet, 2000, ¶ 2). It "has consolidated itself as a very powerful platform that has changed the way we do business…the way we communicate" and share information worldwide (Internet Usage Statistics, 2008, p. 1).

There are more than 1.4 billion online users (Internet Usage Statistics, 2008) with the internet population growing monthly by 15% (Faigley, n.d.). Research shows that in the U.S. approximately 90% of eighteen through forty-two year olds and 79% of baby boomers, age forty-three through sixty-one, currently use the internet (Where is Generation X, 2007). With such high user percentages, the internet has become an efficient way for healthcare industries to directly reach massive markets.

According to the Advisory Board Company (2007), "more than three-quarters of US adults who use the web have searched for health information online, and there is strong interest in being able to interact with providers through the web" (p. 2). Out of 2,600 random adults surveyed in "Drivers of Consumers Choice," 80% with internet access would like to be able to communicate with their doctors online (Advisory Board Company, 2007). Furthermore, these individuals ranked the internet as a top predilection for seeking medical advice (Advisory Board Company, 2007), positioned behind receiving direct physician advice, which ranked number one. This alludes to the fact that many individuals are searching for healthcare advice online with or without the presence of a physician. In fact, the Pew Research Center (2006) reported that 41% of Americans used the internet to determine whether or not they would seek medical attention. While this would seem like a hit to the profitability of healthcare organizations, the overall gain of patient satisfaction and trust for future procedures offsets the loss in profits from primary in-office visits (Fox, 2006). Furthermore, as more people gain access to healthcare information online, they are taking control of their own healthcare needs and directly seeking specialized care. Sg2 Health Care Intelligence reported that the decrease of primary in-office visits is heavily being offset by increases in patients seeking specialty care and outpatient care. Online strategies are proving effective in triaging patients and minimizing the time spent on misdiagnosis (Personal Communication, March 2008).

The Pew Internet & American Life Project reported that 66% of baby boomers were more likely to visit healthcare sites than popular financial information sites (Fox, 2006). Teenagers have also begun to gather much of their health information online, even

though much of the information being researched is about “STDs and illicit drugs” (Fox, 2006). Research by Moores (2004) indicated that in 2002 alone, “more than 110 million Americans gathered health-related information online” (¶ 2), and 70% of these users reported that the information they found influenced their treatment decisions (Moores, 2004). There is a clear and growing interest from patients and consumers in online health information and patients increasingly prefer to search the internet for healthcare information to precede and augment clinical encounters. Thus, providing patients with the option to directly communicate with physicians online and providing valuable healthcare information through various website strategies inherently satisfies a growing number of diverse consumers.

There is a need for healthcare organizations to determine the demands of patients and to satisfy those demands (Baker, Rideout, Gertler, & Raube, 2005; Advisory Board Company, 2007, 2008). Research shows that the internet has become a leading communication medium used by patients to learn about healthcare needs and services (Advisory Board Company, 2007, 2008). This study will attempt to explain the significance of healthcare organizations that use online health strategies to communicate with patients and the correlation to patient preference for those systems that utilize such strategies.

The importance of this study is based on a need to provide healthcare organizations with research regarding the relationship of competitive advantage to implementing online communication strategies, since this is a service trend on the rise (Advisory Board Company, 2007, 2008). This study will seek to provide research on online health communication approaches to provide a framework for implementation that

satisfies patient demand and preference. Healthcare organizations need to be aware of online communication strategies being implemented by the medical community in order to lead in the healthcare market and improve the overall efficiency and effectiveness of medical care (Baker, Rideout, Gertler, & Raube, 2005; Advisory Board Company, 2007, 2008).

LIMITATIONS

Limitations to this study include the following:

- Topica's Online Marketing and Sales Solution is a hosted email application that allows tracking and reporting of mass emails. While Sentara Healthcare hosts the email application and owns the email distribution lists, demographics of survey participants will vary, and not all participants have used or are currently using Sentara services.
- Persons being surveyed are a part of Sentara Healthcare's email distribution list, but are not all patients of Sentara. The distribution list contains emails from individuals who have given Sentara their email address at various events and functions within the region. Not all events were hosted by or affiliated with Sentara Healthcare. Email addresses were also collected and compiled through corporate marketing research efforts.
- The distribution list being used represents various collection methods and research efforts of Sentara and serves as a representation of all Sentara Healthcare facilities and services throughout Virginia and North Carolina.

ASSUMPTIONS

The foundation of this research project was based on the following assumptions:

- The competitive advantage for healthcare organizations that implement online communication strategies will solely be measured by patient preference and satisfaction. Thus, findings will vary according to patients' treatment experience, online services used by the patients, and the demographics of those surveyed.
- It will be unknown whether patients who are surveyed use or have used any type of online health communication services prior to their survey completion.
- The competitive advantage will be measured by patient preference and satisfaction of online strategies being implemented without knowing whether the patient has actually experienced using online healthcare communication strategies prior to their survey completion.
- Patients being surveyed seek medical attention from healthcare organizations that have or use online capabilities.
- Online communication strategies are being implemented by healthcare organizations in an effort to improve patient preference and satisfaction.

PROCEDURES

The data for the study will be based on the distribution and collection of surveys completed by ethnically and culturally diverse individuals within Southeast Virginia and Northeast North Carolina. A survey regarding patient satisfaction and preference will be

distributed via email to patients using Topica's Online Marketing and Sales Solution, a targeted e-mail distribution application. Patients will be provided with a link to the survey designed on Zoomerang.com, which will keep track of responses and provide analysis of results. Questions will be framed to determine whether patients prefer to seek treatment from healthcare organizations that use online communication strategies in an effort to determine the competitive advantage of healthcare organizations that use online strategies. There will be questions in the survey that will seek to determine whether patients who seek medical attention from organizations using online communication strategies are more satisfied with their treatment experience. Two open-ended questions will allow individuals to make recommendations on how to improve online patient communication with health care providers. The data will be collected and analyzed to determine the competitive advantage of healthcare organizations that use online communication strategies to provide health services for their patients.

DEFINITION OF TERMS

The following terms were defined to assist the reader in understanding the study:

- Internet- An interconnected system of networks allowing communication of data among millions of computers worldwide.
- Online Communication Strategies, Online Health Strategies, Online Service Strategies- Internet strategies that link the domains of communication and health and are used to inform, guide and influence patient decisions while enhancing healthcare efficiency (Office of Disease Prevention and Health Promotion, 2009).

- Competitive Advantage- An organization or service that is well known and is preferred by individuals will lead to the eventual adoption of that organization or service. For healthcare organizations, it is gaining a marginal advantage over the competition through patient awareness, preference and support.
- Topica's Online Marketing and Sales Solution- A hosted email application that combines mass marketing capabilities with data integration, conversion optimization and analysis features.
- Zoomerang.com- An online survey software tool that allows users to create and send surveys as well as analyze results.
- Baby Boomers- People who were born between 1945 and 1963 during the Post-World War II baby boom (Fox, 2006).
- Sentara eCare Health Network- A network which uses online methods to link patient medical information between Sentara hospitals, physician practices, and other healthcare sites over a secure network.

OVERVIEW OF CHAPTERS

This study will seek to explore and determine if there is a competitive advantage for healthcare organizations that implement effective online communication strategies for their patients. A need for this study has arisen from the prominence of the internet in society and the need for healthcare organizations to use online strategies to meet patient needs and demands (Advisory Board Company, 2007, 2008). Online health communication strategies seem to be on the rise (Advisory Board Company, 2007, 2008), making the treatment process more efficient and convenient for patients. Thus, this study

will seek to determine whether patients prefer to seek treatment from organizations that implement online strategies and whether patients are more satisfied with their treatment experience. However, a limitation of the research study is that resources will come from an email distribution application hosted by Sentara Healthcare. Even though Sentara hosts the application and owns the contact distribution lists, the demographics of survey participants will vary, and not all participants have used or are currently using Sentara services. So, results will be able to be generalized to the entire population.

Chapter II entails a Review of Literature focusing on the demand for online health communication strategies and effective management of these implementations. Current examples of healthcare systems using online strategies will also be offered to explore the significance of using these strategies in an attempt to improve online communication of health care providers and their patients.

Chapter III focuses on the methods and procedures used to obtain the research data. This section will focus on the survey distribution process and the demographical information of those surveyed. Chapter IV reports the findings of the research, which will provide the reader with an overview and summary of the results of the study.

Chapter V offers a summary of the entire research study and draws conclusions based on the findings. Recommendations will be offered for future research.

CHAPTER II

REVIEW OF LITERATURE

Since implementation of online strategies is a developing trend for healthcare organizations, this review was conducted to provide insight and understanding of competitive advantage as it relates to healthcare organizations that provide online health services. Chapter II was divided into four sections where the following topics were discussed: 1) improving service shortfalls, 2) managing online strategies, 3) example implementations, and 4) online communication strategy synopsis.

IMPROVING SERVICE SHORTFALLS

The Advisory Board Company (2007) states that "every American should have access to a full range of information about the quality…of their healthcare options" (p. 3), a service gap that healthcare organizations are seeking to close. To address existing service gaps and elevate patient satisfaction, leading hospitals and health systems have invested heavily in improving patient service. Up until recently, service initiatives have primarily been focused on the "in-patient experience" (The Advisory Board Company, 2008, p. 2) as patients encounter a lack of communication, meager and delayed care, as well as environment neglect during hospital visits and stays (The Advisory Board Company, 2008). Statistics show that out of 100 patient admissions, 68 service incidents occur (The Advisory Board Company, 2008). However, defining the patient experience as merely an in-hospital experience represents a narrow view of how consumers interact with healthcare systems and represents only "one constituent of the care continuum" (The Advisory Board Company, 2008, p. 2). Research shows that the "consumer experience begins during research and appointment-scheduling phases, and continues through at-

home recovery and follow-up" (The Advisory Board Company, 2008, p. 3). Since this requires a great amount of time and energy on the consumer's end, "improving these interactions can positively impact consumer impressions of service quality and create a seamless patient encounter with the hospital" (The Advisory Board Company, 2008, p. 4) or health system.

Patients encounter the same service gaps in an out-patient status. Outside of the hospital walls, patients must conduct research, prepare for treatment, schedule appointments, recover, rehabilitate, and follow-up (The Advisory Board Company, 2008). Patients may experience communication breakdowns, inabilities in accessing needed information, and deficient consideration regarding time and efforts. Thus, "at some point, whether before, during, or after the hospital stay, patients are likely to encounter a service shortfall" (The Advisory Board Company, 2008, p. 4).

Al-Ubaydli (2007) shows that the hospital or healthcare's website is the "medium best positioned to address service shortfalls and to provide consumers with the feedback and features they demand" (p. 23). Online tools and services can facilitate access to information, enable transactions with the hospital, and open communication channels with care providers. However, healthcare organizations are competing with other large, internet focused and web-savvy industries such as Amazon.com and Google, which have everything ready and available to the user with the click of the mouse button. Thus, patients have high expectations when it comes to functions of healthcare websites, and the healthcare industry has been slow in adopting the functionalities which are standard to these out-of-industry sites. The Advisory Board Company (2008) states:

> The Council's Hospital Website Census Initiative, a sampling of online features at hospital websites across the country, revealed that many of the transactional and communication tools so desired by patients are not widely available--less than 10 percent of sampled hospital websites offered online appointments, price estimators, communication features or access to medical records or lab results (p. 5).

While there are no set templates that healthcare organizations must use when creating online communication tools and providing access to health information, providers should employ strategies which include features that patients demand. According to the Advisory Board Company (2008), "health content on hospital websites should showcase the institution's own service offerings" (p. 12). Linking to reliable and dependable third party sites is a cost-effective and easily managed method to deliver access to general reference material if the health organization feels the information is needed. However, "accruing evidence indicates that encyclopedic, authoritative reference material housed on hospital websites [is a] nice to have" (The Advisory Board Company, 2008, p. 11) feature, but there is no added value to consumers by finding it on a hospital website (The Advisory Board Company, 2008). Consumers find more value in finding "content specific to the hospital or relevant to the patient's own personal experience" (The Advisory Board Company, 2008, p. 11).

According to Johnson-Eilola (1996), "in a growing number of markets, [including healthcare] primary value is located in information itself" (p. 245). Therefore, a balance needs to exist in offering patients general health information, specific hospital reports, available treatments, and procedures. Patients should have the ability to make

appointments and pre-register for events and visits to their choice service provider as well as be permitted to access their own medical documents and financial information. Developing communication portals for corresponding with care providers also holds prominence as this ability to electronically communicate with physicians and gather information on healthcare is alleged to influence "consumers' choice of physician and services" (The Advisory Board Company, 2008, p. 38).

MANAGING ONLINE STRATEGIES

Regardless of which web applications healthcare organizations use, the strategies and service initiatives chosen by all healthcare organizations should be managed and implemented in ways that work to satisfy demands and make the patient experience rewarding and positive (The Advisory Board Company, 2008). Research indicates that close observation, frequent updating, routine maintenance and well-qualified professional writers familiar to the medical field are pertinent to appropriately using web applications and to the success and credibility of the organization website (The Advisory Board Company, 2008). While it seems that "well-written, internally generated content requires more staff time and coordination…[it] can [also] showcase institutional strengths in ways that convey understanding of the [healthcare] market" (The Advisory Board Company, 2008, p. 14).

According to research provided by Envision Solutions (2007), most "U.S. internet users rely on established sources… [such as] corporate…and non-profit produced websites" to provide reliable healthcare information (Diving Deeper into Online Health Search, n.d., ¶ 2). Healthcare searchers are more likely to value information from websites that are considered "credible and reliable" (Diving Deeper into Online Health

Search, n.d., ¶ 2), which is directly connected to the author of the content provided. Thus, online service developers "must make rhetorical choices based on audience needs…and work through challenges of writing, editing, and project management" (Willerton, 2008, p. 311).

Willerton (2008) suggests "writers and editors of online health information need the ability to use and understand the language of health and medicine" (p. 329) in order to connect with online health researchers. This ability can be achieved through proper education, training, "professional development…activities and experience" (Willerton, 2008, p. 329). Johnson-Eilola states that great "potential [exists in] revising the relationship between technology and communication" (Relocating the Value of Work, 1996, p. 245). Thus, understanding how to develop and manage efficient healthcare websites and realizing the effects of expanded communication via social web applications is important as efforts to use more electronic communication continue to expand.

Still, creating proficient healthcare sites is challenging, and the struggles do not end by designing credible web applications with features that meet patient demands. Healthcare organizations face diffidence from doctors on using the web for patient care. Moores (2004) claims that "90% of surveyed Americans said they would like to be able to contact their physician on the internet; 40% said they would pay for this access; and 77% said they would like to be able to ask questions online rather than visit the doctor's office" (Healthcare on the Internet, ¶ 2). However, doctors have been slow to adopt the idea of online communication and reluctant to provide these services. In the Forrester Report, "Why Doctors Hate the Net," Barrett reports that doctor's providing services via the web would be an "additional burden on an already over-crowded schedule" (2000, ¶1)

with additional concerns “about liability, privacy, and getting paid” (2000, ¶1). Plus, expanded online communication, in and of it self, is expensive. Healthcare organizations may not have the funds necessary to create the technologically advanced sites demanded by consumers which could result in department cut-backs and salary decreases. The provisional websites could create pre-conceived ideas and false judgments of the physicians and healthcare services associated with the sites. Furthermore, the additional workloads for physicians through using online communication could create service gaps and reductions in patient care effectiveness. Physicians may receive numerous irrelevant inquiries, which may not hold response precedence. As a result, false information and misguided opinions about physicians and healthcare services could be formed or published through online means, causing irresolvable impacts (Why Doctors Hate the Net, 2000).

However, the overall benefits to online communication seem to outweigh the concerns (The Advisory Board Company, 2007). The internet is forcing accountability and additional safety measures among healthcare organizations and medical professionals as consumers of health services are being allowed to see where a physician graduated, if he or she has any outstanding lawsuits against them and the rankings of the hospital and the services being used in relation to others. Online communication is increasing the honesty of patients as many individuals feel much more comfortable by writing about their issues or problems rather than talking to a doctor in person (The Advisory Board Company, 2007). If physicians are given the ability to review the symptoms and problems that patients experience through written claims, the number of physician errors and misdiagnosis could decrease. Moreover, if doctors gather information about patients

through online means, time during in-office visits is reduced, allowing more patients to be seen. Thus, money could be saved through online health visits, allowing for additional monetary funds, including more physician compensation (The Advisory Board Company, 2007, 2008).

EXAMPLE IMPLEMENTATIONS OF ONLINE STRATEGIES

Healthcare organizations can research strategies and implement online applications which satisfy patient demands and physician concerns. Sentara Healthcare in Southeast Virginia has measured success through using internal web strategies that promote physician involvement and interaction with patients. MyHealth MyChart is one element of the larger Sentara eCare Health Network that uses online methods to link patient medical information between Sentara hospitals, physician practices, and other healthcare sites over a secure network. Through a simple log-in process and a one-time membership fee, patients can review test results, schedule an appointment, ask a simple non-urgent medical question, and manage their own healthcare as well as their families.

For organizations with the budget to support them, these "vendor-generated tools and media [can] add an extra dimension" (The Advisory Board Company, 2008, p. 13) to the online experience, but there are popular social networking web applications that also allow hospital systems to reach other varied online crowds at minimal cost. The social website strategy team at Sentara Healthcare uses blogs, Facebook.com, Twitter.com, and YouTube.com to work towards satisfying patient demands.

Blogs (contraction for Web Log) are recurrent, sequential publications of personal thoughts and Web links which have been popular since the late nineties (What are Blogs, 2002). Since blogs are frequently updated and can link large groups of users by specific

topics, Sentara Healthcare has been open to the idea of retaining physician and patient blogs about healthcare services. The organization has begun to implement their own strategies in an effort to interact with large amounts of people on patient-chosen topics and are in the process of designing various ways to utilize this application on their website.

The Sentara Website Strategy team also considers Facebook to be an ideal channel for job and education recruitment. Facebook.com was originally created as a social network for college students to connect with people at various colleges or universities. However, over the past three years, Facebook has started allowing everyone with an email address to be able to communicate on their network. Sentara plans to monitor a Facebook account for nurse recruiters to solicit students for the educational program and showcase job opportunities. However, due to the ability for negative comments and opinions, strict policies and procedures are being put in place regarding the nurse recruiters' association with Sentara Healthcare and their interaction on Facebook. While unplanned messages could potentially harm a company's reputation, affecting patient preference, Sentara understands that preparation and proper management of these messages can create an opportunity to influence and interact with various users in a personal way.

Additionally, Sentara is using Twitter to keep the public up to date on pertinent information and achievements of Sentara Healthcare. Since Twitter is a free social messaging application that allows people to stay connected in real-time, patients and followers of Sentara are able to know what is happening on a minute to minute basis.

Again, proper management and frequent updating is key in order to gain followers and understand more about competitor trends and accomplishments.

Finally, Sentara Healthcare is using YouTube.com to reach potential patients. YouTube is a website that allows users to upload and view millions of videos all around the world. Users can set up different types of channels depending on the types of videos they upload. Users are not required to upload videos, but are allowed to subscribe and comment on the videos of other channels. Sentara Healthcare currently has a YouTube channel with numerous videos uploaded by OR Live. Although the effectiveness of using YouTube relies on interaction with other users and channels, Sentara does not allow comments or interaction. Still, YouTube's insight function provides Sentara with a reliable system to keep track of viewing statistics, search terms, and demographics and is an easy way to promote health services to the global market and help generate preference.

In addition to Sentara Healthcare, healthcare organizations throughout the country have implemented online service strategies in an attempt to relieve physician concerns, satisfy patient demands, and address service shortfalls. The Cleveland Clinic Heart and Vascular Institute in Cleveland, Ohio, took the responsibility of online communication away from physicians by offering patients real-time secure consults with specialized nursing staff. According to the Cleveland Clinic program, “full-time employees [, other than physicians,] are required to handle daily chat volume…[and] names and demographic information are collected at the outset, so conversion of chatters into patients can be monitored” (Ask a Nurse section, 2008, ¶1). The organization is also offering “free educational online videos” (Free Online Health Videos section, 2008, ¶1) via YouTube “in a continued effort to promote health and wellness, [and] to educate,

motivate and inspire healthy lifestyle choices" (Free Online Health Videos section, 2008, ¶1).

At the University of Florida Physicians, "the UF College of Medicine faculty group practice affiliated with the Shands HealthCare system that provides outpatient care in Gainesville" (University of Florida Physicians Offers Secure Online Communication Services, 2006, ¶1), and is using the RelayHealth service "to allow patients, clinicians and staff to work together in a secure, online environment" (University of Florida Physicians Offers Secure Online Communication Services, 2006, ¶1). By using RelayHealth, patients can interact with physicians, "request prescription refills and renewals, schedule appointments, receive lab results, and request referrals" (University of Florida Physicians Offers Secure Online Communication Services, 2006, ¶2). Patients can also resolve non-urgent health matters by conducting a "webVisit" (University of Florida Physicians Offers Secure Online Communication Services, 2006, ¶8) consultation. This online application provides good opportunities to strengthen doctor-patient relationship as clinicians can have a consultation visit, equivalent to an in-office visit, with the patient through online features wherever that patient may be. Through the online consultation, physicians gather key data about a patient's symptoms and suggest medications and treatments in a fast and effective manner. With the RelayHealth eScript solution, doctors can immediately write electronic prescriptions and securely send them to the patient's pharmacy of choice. "In some cases, doctors…even get paid for webVisits" (University of Florida Physicians Offers Secure Online Communication Services, 2006, ¶2). All of the RelayHealth service features are provided at no cost to the patients with the exception of the webVisit feature, which costs the same as an in-office

visit depending on insurance coverage. However, with the time saved by the patient, the minor fee has proven tolerable (University of Florida Physicians Offers Secure Online Communication Services, 2006).

ONLINE COMMUNICATION STRATEGY SYNOPSIS

Hospitals and healthcare organizations need to create their own strategies and conduct their own research to design the most targeted and useful online information for patients and consumers. The "hospital [or healthcare service must understand] attributes consumers value most and the tradeoffs consumers make when they research and choose a hospital [or healthcare facility] for care" (Schaal, 2007, p. 4) To enhance the experience of patients, web applications and websites should offer a variety of features aimed at addressing patient needs for interaction, information and transaction. Harris Interactive (as cited in Willerton, 2008) suggests that "the information…[patients find online] enhances their understanding of their health problems, has an impact on how they manage their overall health, affects how they communicate with their doctors, and improves their compliance with prescribed treatments" (Willerton, 2008, p. 311). Since so many people are searching the internet for health information, "the question of how to design accurate, useful, and usable online health information is clearly an important one…" (Willerton, 2008, p. 312). Ultimately, healthcare industries are responsible for developing appropriate strategies in order to capitalize on patients' wants and needs, but they must also be prepared for the challenge of effectively managing these methods and changing them, as necessary, to fit the demand.

SUMMARY

Chapter II explained the literature review on online health strategies as they relate to patient preference and demand. This chapter studied how online strategies addressed service shortfalls for patients during all stages of the treatment process. This review also analyzed the development and implementation of online health communication strategies and presented problems and solutions for managing effective strategies. Provided in this chapter were examples of effective implementations from three major healthcare organizations, Sentara Healthcare in Southeastern Virginia, the Cleveland Clinic Heart and Vascular Institute in Cleveland, Ohio, and the University of Florida Physicians affiliated with Shands HealthCare system in Gainesville, Florida. A specific template was not provided on how to design effective online health services. Rather, research on features and services that meet patient wants and needs was provided in an effort to provide a framework for future implementations. Chapter III will discuss the methods and procedures implemented by the researcher to gather the needed data for this study.

CHAPTER III

METHODS AND PROCEDURES

The objective of this study was to determine the competitive advantage for healthcare organizations which implement effective online communication strategies for their patients as measured by patient preference. This chapter covers the methods and procedures utilized in this research study and includes information regarding the population studied, the design of the instrument used, the methods employed for collecting data, and the procedures utilized for analyzing the data.

POPULATION

The population of this study was 500 ethnically and culturally diverse individuals within Southeast Virginia and Northeast North Carolina ranging from 18-years-old to 75-years-old. The distribution list has been collected through various methods and corporate marketing research. The distribution list contains emails from individuals who have given Sentara their email address at various events and functions within the region. Not all events were hosted by or affiliated with Sentara Healthcare. Email addresses were also collected and compiled through corporate marketing research efforts and represents individuals throughout Southeast Virginia and Northeast North Carolina. Thus, although persons being surveyed are part of Sentara Healthcare's email distribution list, not all are patients of Sentara.

INSTRUMENT DESIGN

A survey was designed in order to determine patient preference for online health services so that healthcare organizations may better understand what patients demand in an effort to enhance communication and improve medical care (see Appendix A). The

survey was a combination of forced-choice responses with open-ended questions. The responses to the forced-choice statements included 5=strongly agree, 4=agree, 3=uncertain, 2=disagree, and 1=strongly disagree. Each statement and all questions within the survey are related to the research goals of this study.

METHODS OF DATA COLLECTION

An email was sent to 500 contacts within the Sentara distribution list using Topica's Online Marketing and Sales Solution. In the email for distribution was an explanation regarding what the research study was about, why it was important, and why participation was needed (see Appendix B). Included in the email was a link to a questionnaire designed on Zoomerang.com for participants to complete. Each survey included instructions on how to complete the survey and the time it would take the participants to complete the survey. A follow-up email was sent eleven days after the initial mailing to solicit participation (see Appendix C).

STATISTICAL ANALYSIS

Data were collected, reviewed and analyzed in an effort to support the research goals for this study. As a means of analysis, the mean for each forced-choice response was calculated to determine patient preference for online health communication strategies in an effort to show the competitive advantage for healthcare organizations that use online strategies for their patients. Data collected from the three open-ended questions were analyzed to determine if there were any commonalities in participants' responses that would help healthcare organizations identify what patients demand in regards to online health services. This was reported in number and frequency.

SUMMARY

Chapter III described the methods and procedures used to collect, review and analyze data for this study. The population of this study included 500 contacts within the Sentara distribution list. A questionnaire was developed to determine patient preference for online health strategies in relation to competitive advantage for healthcare systems who implement these strategies. The surveys were emailed to contacts within the Sentara distribution list using Topica's Online Marketing and Sales Solution. Follow-up emails were sent to each contact to ensure that surveys were completed and returned. Upon the return of the surveys, the data were collected, reviewed and analyzed. The frequency for each category of response was reported as well as the answers to the open-ended questions. Chapter IV will explain the findings of the survey.

CHAPTER IV

FINDINGS

The purpose of this study was to determine the competitive advantage for healthcare organizations that implement effective online communication strategies for their patients. This study provided information regarding the trend of online health features and the various online strategies being implemented by successful healthcare organizations across the United States. An online survey was used in obtaining the necessary data for acquiring patient preference for online healthcare strategies. The electronic survey was emailed to patients of varying healthcare organizations within Southeast Virginia and Northeast North Carolina. This chapter contains the findings from the survey data collected.

The survey responses were analyzed both separately and collectively to identify patterns of commonalities for patient preference of online health strategies. The mean analysis for each item was calculated and reported by frequency for each category of responses on a percentile basis.

RESPONSES TO THE SURVEY

Five hundred surveys were emailed to patients within Southeast Virginia and Northeast North Carolina. Out of the 500 surveys initially emailed, 134 declined to participate. A total of 366 surveys or 73% percent of the surveys were completed. Table 1 illustrates the responses as opposed to the number of surveys mailed.

Table 1. ***Survey Statistics***

Survey Statistics	Total
Surveys Emailed	500
Survey Participants	366
Percentage of Return	73%

SURVEY RESULTS

The online survey responses were analyzed to identify patterns of commonalities for patient preference for online healthcare communication strategies. The mean analysis for each item was calculated and reported by frequency for each category of response on a percentile basis.

PREFERENCE OF ONLINE HEALTH COMMUNICATION STRATEGIES

Question 1: Please select your age group.

Thirty-nine percent (143) of patients completing this survey were 18-30 years old (generation y); 21 percent (76) were 31-42 years old (generation x); 32 percent (119) were 43-61 years old (baby boomers); 6 percent (21) of patients were 62-71 years old (matures), and 2 percent (7) of patients who completed the survey were 71+ (after work). The average age of participants was 18-30 years old (generation y).

Question 2: What is your gender?

Forty-five percent (165) of patients who completed the survey were male; fifty-five percent (201) were female.

Statement 1: I am aware that my healthcare organization uses the internet to interact and communicate with patients.

Thirty-six percent (130) of patients strongly agreed they were aware that their healthcare organization uses the internet to interact and communicate with them; 29 percent (107) agreed; 21 percent (76) percent neither agreed nor disagreed; 6 percent (23) disagreed, and 8 percent (30) strongly disagreed. The mean score for this item was 3.79, indicating that the average response to this item was to agree with this statement.

Statement 2: I frequently use the internet to research health options.

Thirty-five percent (129) of the patients strongly agreed with this statement; 38 percent (139) agreed; 12 percent (44) neither agreed nor disagreed; 12 percent (44) disagreed with this statement, and 4 percent (15) strongly disagreed. The mean score for this item was 3.89, indicating that the average response to this item was to agree with this statement.

Statement 3: I use the internet on a regular basis to interact with my healthcare provider.

Five percent (19) of the participants strongly agreed with this statement; 12 percent (43) agreed; 15 percent (54) neither agreed nor disagreed; 35 percent (127) disagreed, and 34 percent (123) strongly disagreed. The mean score for this item was 2.22 indicating that the average response to this item was to disagree with this statement.

Statement 4: I am satisfied with the online capabilities of my healthcare provider.

Eleven percent (41) of the participants strongly agreed that they were satisfied with the online capabilities of their healthcare provider; 19 percent (71) agreed; 43 percent (157) neither agreed nor disagreed; 17 percent (64) disagreed, and 9 percent (33) strongly disagreed. The mean score for this item was 3.03, indicating that the average response to this item was neither to agree nor disagree with this statement.

Statement 5: I would like for my healthcare provider to offer more online features such as:

- Appointment scheduling
- Communication with medical staff
- Options for learning more about healthcare
- Bill payment functions

Forty percent (148) of the patients strongly agreed that they would like their healthcare provider to offer more online features such as appointment scheduling, communication with medical staff, options for learning more about healthcare and bill payment functions; 33 percent (121) patients agreed; 17 percent (63) of patients neither agreed or disagreed that they would like for their healthcare provider to offer more online features such as appointment scheduling, communication with medical staff, options for learning more about healthcare and bill payment functions; 6 percent (22) disagreed, and 3 percent (12) strongly disagreed that they wanted their healthcare provider to offer online features such as appointment scheduling, communication with medical staff, options for learning more about healthcare and bill payment functions. The mean score for this item was 3.98, indicating that the average response to this item was to agree.

Statement 6: I associate the quality of an organizations health services to the credibility and usability of their online applications.

Nine percent (33) of the participants strongly agreed that they associated the quality of an organizations health services to the credibility and usability of their online applications; 27 percent (99) agreed; 27 percent (97) neither agreed nor disagreed; 22 percent (81) disagreed, and 15 percent (56) strongly disagreed. The mean score for this item was 2.93, indicating that the average response to this item was neither to agree or disagree.

Statement 7: I choose my physician based on whether I can communicate with him/her online.

Four percent (14) of patients strongly agreed that they choose their physician based on whether they can communication with him/her online; 8 percent (30) agreed; 14 percent (53) neither agreed nor disagreed; 39 percent (143) disagreed, and 34 percent (126) strongly disagreed. The mean score for this item was 2.06, indicating that the average response to this item was to disagree.

Statement 8: I am interested in using social networking applications, such as Blogs, Facebook, Twitter and YouTube to learn more about my healthcare options.

Nine percent (33) of patients strongly agreed that they were interested in using social networking applications, such as Blogs, Facebook, Twitter and YouTube to learn more about their healthcare options; 12 percent (44) agreed; 20 percent (74) neither agreed nor disagreed; 25 percent (92) disagreed; 34 percent (123) strongly disagreed with this statement. The mean score for this item was 2.37, indicating that the average response to this item was to disagree with this statement.

Statement 9: If given the option, I would handle the majority of my healthcare needs online.

Eighteen percent (65) of patients strongly agreed that they would handle the majority of their healthcare needs online if given the option; 30 percent (109) agreed; 23 percent (83) neither agreed nor disagreed; 16 percent (59) disagreed with the statement, and 14 percent (50) strongly disagreed. The mean score for this item was 3.25, indicating that the average response to this item was neither to agree nor disagree.

Statement 10: I think that the internet is a safe and reliable place to store my personal information and documents regarding my health.

Eleven percent (40) of the patients strongly agreed that the internet is a safe and reliable place to store their personal information and documents regarding their health; 22 percent (82) agreed; 23 percent (86) neither agreed nor disagreed; 21 percent (78) disagreed, and 22 percent (80) strongly disagreed to this statement. The mean score for this item was 2.76, indicating that the average response to this item was neither to agree nor disagree. See Table 2.

Table 2. ***Patient Preference of Online Health Communication Strategies, Part I***

PART I: DEMOGRAPHIC QUESTIONS						
1. Please select your age group.	18-30	31-42	43-61	62-71	71+	
Percentage (%) of responses	39	21	32	6	2	
2. What is your gender?	Male		Female			
Percentage (%) of responses	45%		55%			
PART I: STATEMENT	**SD**	**D**	**U**	**A**	**SA**	**MEAN**
1. I am aware that my healthcare organization uses the internet to interact and communicate with patients.	1	2	3	4	5	**3.79**
Percentage (%) of responses	8	6	21	29	36	
	1	2	3	4	5	**3.89**

2. I frequently use the internet to research health options.						
Percentage (%) of responses	4	11	12	38	35	
3. I use the internet on a regular basis to interact with my healthcare provider.	1	2	3	4	5	**2.22**
Percentage (%) of responses	34	35	15	12	5	
4. I am satisfied with the online capabilities of my healthcare provider.	1	2	3	4	5	**3.03**
Percentage (%) of responses	9	17	43	19	11	
5. I would like for my healthcare provider to offer more online features such as: - Appointment scheduling - Communication with medical staff - Options for learning more about healthcare - Bill payment functions	1	2	3	4	5	**3.98**
Percentage (%) of responses	3	6	17	33	40	
6. I associate the quality of an organizations health services to the credibility and usability of their online applications.	1	2	3	4	5	**2.93**
Percentage (%) of responses	15	22	27	27	9	
7. I choose my physician based on whether I can communicate with him/her online.	1	2	3	4	5	**2.06**
Percentage (%) of responses	34	39	14	8	4	
8. I am interested in using social networking applications, such as Blogs, Facebook, Twitter and YouTube to learn more about my healthcare options.	1	2	3	4	5	**2.37**
Percentage (%) of responses	34	25	20	12	9	
	1	2	3	4	5	**3.25**

9. If given the option, I would handle the majority of my healthcare needs online.						
Percentage (%) of responses	14	16	23	30	18	
10. I think that the internet is a safe and reliable place to store my personal information and documents regarding my health.	1	2	3	4	5	**2.76**
Percentage (%) of responses	22	21	23	22	11	

PATIENT PREFERENCE OF ONLINE HEALTH STRATEGIES AND RECOMMENDATIONS FOR COMMUNICATION IMPROVEMENTS WITH HEALTHCARE PROVIDERS

Question 1: What online features would you use if your healthcare provider offered them? Select all that apply.

Sixty-seven percent (247) patients claim that they would use online features that would give them the ability to communicate with medical staff; 76 percent (277) claim that they would use online bill payment options; 62 percent (226) of patients claimed that they would like access to health records; 85 percent (311) would use scheduling features; 66 percent (240) would register for classes or screenings, and 61 percent (222) would subscribe to health reminders and/or email newsletters. See Table 3.

Table 3. ***Patient Preference of Online Health Communication Strategies, Part II***

PART II: OPEN-ENDED QUESTION	
1. What online features would you use if your healthcare provider offered them? Select all that apply.	Percentage (%) of responses
Ability to communicate with medical staff	67
Bill payment options	76

Access to health records	62
Scheduling (physician office appointments, medical testing)	85
Registration for classes or screenings	66
Subscribe to health reminders and/or email newsletters	61

2. Please list if there are any <u>other</u> online features you would use if your healthcare provider offered them.

The answers collected were consolidated and reported as follows:

1. Prescription refill capabilities (e.g., e-prescriptions) (13)
2. The ability to communicate with physician about non-emergency issues or questions (10)
3. Scheduling options (ie: appointments, events, screenings) (8)
4. Ability to view patient charts, x-rays and documents (6)
5. Appointment reminder capabilities (4)
6. Blogging capabilities (ie: physician preference, advice blogs, opinion blogs) (2)
7. Referral service capabilities (2)
8. Links to helpful healthcare information sites (1)
9. Emergency health advisor services (1)

3. What recommendations do you have that may help your healthcare provider improve communications with you?

The answers collected were consolidated and reported as follows:

1. Online communications should target specific demographic segments (e.g., seniors, parents, teens, etc.)

2. Target communication methods to specific demographic segments (e.g., United Postal Service for seniors, text for young adults and email for professionals)
3. Establish a hotline for patient guidance on who to contact/email
4. Establish online communication portals for insurance/billing questions
5. Revamp internal practice communications (e.g., make sure receptionists/nurses forward patient messages to doctors)
6. Answer prescription renewal questions efficiently
7. Send patient alerts when tests results are ready, have been received and reviewed by physician
8. Do not make online strategies the sole source of communication, patients value other avenues (2)
9. Make scheduling appointments, classes and newsletter tips available electronically (6)
10. Create online doctors' visits, extend office hours in the evening or create weekend hours to accommodate the working patient
11. Send patient appointment alerts and reminders for routine visits/exams via email or text (4)
12. Provide sufficient online outlets for patient opinion and information
13. Mail hard copy documents when topic matter is lengthy; otherwise use email to communicate

14. Do not forget that a patient's health is a personal matter and online communications is not the answer to quality healthcare; it requires collaboration from many areas throughout the system
15. Always make sure to have a help desk person available for the patient to speak to in case they run into any issues or problems with online communication methods
16. Keep your website updated and in line with current trends and features
17. Advertise online communication strategies effectively so that patients know what you have and how to use the features (4)
18. Make sure that practices employ fast responses with online tools
19. Follow up with staff to make sure they are providing excellent customer service whether it be in person or online; make sure patients are being treated with care and compassion
20. Do not overuse email communication

SUMMARY

The data from the online surveys were analyzed and presented in this chapter. Five hundred surveys were emailed to ethnically and culturally diverse individuals within Southeast Virginia and Northeast North Carolina ranging from 18-years-old to 75-years-old. A total of 366 surveys or 73% percent of the surveys were completed. Thirty-nine percent (143) of patients completing this survey were 18-30 years old (generation y); 21 percent (76) were 31-42 years old (generation x); 32 percent (119) were 43-61 years old (baby boomers); 6 percent (21) of patients were 62-71 years old (matures), and 2 percent (7) of patients who completed the survey were 71+ (after work). The average age of

participants was 18-30 years old (generation y). The survey was a combination of forced-choice responses with open-ended questions to determine patient preference of using online health service strategies and online strategies patients prefer.

From the analyzed data, the following online health communication strategies were believed to be preferred by patients:

- Prescription refill capabilities
- The ability to communicate online with physician and medical staff
- Online scheduling options
- Access to electronic patient charts, x-rays and documents
- Online appointment reminder capabilities
- Blogging capabilities
- Referral service capabilities
- Links to helpful healthcare information sites

Chapter V will address what has been presented in the first four chapters of this research study. Conclusions will be drawn based on the findings, and recommendations will be offered for future research studies.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Chapter V summarizes what has been accomplished in this research. Conclusions will be drawn from the analyzed data and will answer the research goals of this study. Recommendations for future studies will be made from the research findings.

SUMMARY

The purpose of this study was to determine the competitive advantage for healthcare organizations that implement effective online communication strategies for their patients. To answer this problem, the following research goals were established:

RQ 1. Do patients prefer to seek medical attention from healthcare organizations that have implemented online communication strategies?

RQ 2. Are patients who seek medical attention from healthcare organizations that have implemented online communication strategies more satisfied with their treatment experience?

RQ 3. What recommendations can be made to improve online patient communication with health care providers?

With the growth of healthcare research online, communication strategies of healthcare organizations have changed over the past few decades. With a growing interest in online health information, there is a need for healthcare organizations to provide patients with options to communicate with physicians online and provide valuable healthcare information through various website strategies (Baker, Rideout, Gertler, & Raube, 2005; Advisory Board Company, 2007, 2008). This research sought to determine whether healthcare organizations that provide online communication strategies have a

competitive advantage over healthcare providers who do not provide these services for their patients.

The need for healthcare organizations to determine patient demands and to satisfy those demands is eminent (Baker, Rideout, Gertler, & Raube, 2005; Advisory Board Company, 2007, 2008). Thus, providing healthcare organizations with research regarding the relationship of competitive advantage to implementing online communication strategies is important (Advisory Board Company, 2007, 2008). This study is useful to healthcare organizations and their affiliates because it provides research on online health communication strategies currently being utilized to provide a framework for implementation. The research also highlights patient preference of certain online health strategies and offers improvements for patient communication with healthcare providers. In order to lead in the healthcare market and improve the overall efficiency and effectiveness of medical care, healthcare organizations need to be aware of online communication strategies currently being implemented by the medical community (Baker, Rideout, Gertler, & Raube, 2005; Advisory Board Company, 2007, 2008).

The scope of the research was limited to the distribution of 500 electronic surveys to diverse patients within Southeast Virginia and Northeast North Carolina. The survey combined forced choice responses with open response questions. The responses included strongly disagree, disagree, uncertain, agree, and strongly agree. Each survey statement and question correlated with the research goals of this study. The survey instrument was devised to determine what patients prefer in regards to online health communication strategies and to elicit suggestions for online communication improvements with healthcare providers. Three hundred and sixty-six or 73 percent of the electronic surveys

were completed. The data were then reviewed, analyzed, and reported in the form of percentages and the measure of central tendency, the mean, for the population.

CONCLUSIONS

The following conclusions were based on the findings of this research study and its goals:

RQ 1. Do patients prefer to seek medical attention from healthcare organizations that have implemented online communication strategies?

The survey results from the research indicated that the majority (73%) of patients frequently use the internet to research health options. However, according to the research, patients do not base their choice of a physician on whether they can communicate with her/him online. Thirty percent (109) of patients agreed that if given the option, they would handle the majority of their healthcare needs online, with only sixteen percent (59) disagreeing with this statement. However, the mean score for this item was 3.25, which indicated the average response was that patients neither agreed nor disagreed with this statement. Furthermore, even though twenty-seven percent (99) of patients associate the quality of an organization's health services to the credibility and usability of their online applications, the mean score for this statement was 2.93 indicating that overall, patients neither agreed nor disagreed with this statement. Thus, it cannot be determined whether patients prefer to seek medical attention from healthcare organizations that have implemented online communication strategies.

RQ 2. Are patients who seek medical attention from healthcare organizations that have implemented online communication strategies more satisfied with their treatment experience?

Forty percent (148) of patients strongly agreed that they would like their healthcare provider to offer more online features such as appointment scheduling, communication with medical staff, options for learning more about healthcare and bill payment functions. From the research, it was determined that the mean score for preference of this statement was 3.98, indicating that the average response to this item was that patients agreed with this statement. Research showed that the internet has become a leading communication medium used by patients to learn about healthcare needs and services. Online strategies being implemented by healthcare organizations work towards closing in-patient and out-patient service gaps through information access, transaction capabilities, and communication channels with care providers (Advisory Board Company, 2007, 2008). From this research, it can be concluded that patients desire more online health strategies, and it can be assumed that patients who receive treatment from healthcare organizations which implement these and other preferred online health strategies will be more satisfied with their treatment experience.

RQ 3. What recommendations can be made to improve online patient communication with health care providers?

The survey results from the research indicated that online health communication strategies are preferred but are not necessarily linked with who patients will choose as their physician or healthcare provider. Recommendations for improving online patient communication with health care providers include the following:

- Online communications should target specific demographic segments (e.g., seniors, parents, teens, etc.)

- Target communication methods to specific demographic segments (e.g., United Postal Service for seniors, text for young adults and email for professionals)
- Establish a hotline for patient guidance on who to contact/email
- Establish online communication portals for insurance/billing questions
- Revamp internal practice communications (e.g., make sure receptionists/nurses forward patient messages to doctors)
- Answer prescription renewal questions efficiently
- Send patient alerts when tests results are ready, have been received and reviewed by physician
- Do not make online strategies the sole source of communication, patients value other avenues (2)
- Make scheduling appointments, classes and newsletter tips available electronically (6)
- Create online doctors' visits, extend office hours in the evening or create weekend hours to accommodate the working patient
- Send patient appointment alerts and reminders for routine visits/exams via email or text (4)
- Provide sufficient online outlets for patient opinion and information
- Mail hard copy documents when topic matter is lengthy; otherwise use email to communicate

- Do not forget that a patient's health is a personal matter and online communications is not the answer to quality healthcare; it requires collaboration from many areas throughout the system
- Always make sure to have a help desk person available for the patient to speak to in case they run into any issues or problems with online communication methods
- Keep your website updated and in line with current trends and features
- Advertise online communication strategies effectively so that patients know what you have and how to use the features (4)
- Make sure that practices employ fast responses with online tools
- Follow up with staff to make sure they are providing excellent customer service whether it be in person or online; make sure patients are being treated with care and compassion
- Do not overuse email communication

Being able to fill prescriptions online was the number one demanded feature of patients followed by the ability to communicate online with physicians, schedule appointments online and have access to personal electronic health charts, x-rays, and documents. Patients repeatedly suggested that healthcare providers need to make consumers aware of their internet communication strategies in order for patients to fully utilize their online features. As it relates to this study, the competitive advantage of healthcare organizations is created through patient awareness, preference and support. Thus, healthcare organizations that satisfy patient demands through implementing desired

online services and making patients aware of these services will be preferred by these individuals. This will lead to the eventual adoption of that organization or service.

RECOMMENDATIONS

Based on the results of this study, the following recommendations were made by the researcher:

1. Healthcare organizations should use the research provided in this study to implement internet communication strategies preferred by patients in an effort to gain the competitive advantage in the healthcare market.
2. Healthcare organizations should review the suggestions from patients regarding improving online communication with health care providers in an effort to satisfy health consumers' wants and needs and to improve internal operations.
3. Online health strategy teams should utilize this research study to understand more about online health trends and patient preference of such trends prior to spending funds on features that patients do not prefer or demand.
4. Since this research focused only on patients within Southeast Virginia and Northeast North Carolina, future research should be conducted on patients throughout the entire states of Virginia and North Carolina to compare patient preference of online healthcare communication strategies across greater geographic regions.
5. Use of research findings should take online accessibility into account. Thus, this research study might better benefit metropolitan regions, where online accessibility is prevalent.

6. A follow-up study should be implemented to determine what new online health strategies patients are seeking and what additional recommendations patients have regarding improving online patient communication with healthcare providers.
7. Since the development of online health strategies is on the rise, future research should include ethnicity and economic status barriers and the effect this has on comprehension and usability of online health communication features.

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APPENDICES

APPENDIX A – Survey

APPENDIX B – Email Cover Letter

APPENDIX C – Follow-up Email Cover Letter

APPENDIX A

SURVEY

Patient Preference of Online Health Communication Strategies

Directions: Please complete this survey regarding your preference in using online health services in an effort to enhance communication and improve medical care for you and your family. In Part I, rate how strongly you agree or disagree with each of the following statements by clicking on the appropriate bubble. Indicate your answers by rating each item on the following scale, 5 = Strongly Agree, 4 = Agree, 3 = Uncertain, 2 = Disagree, 1 = Strongly Disagree. In Part II, please answer each question and write your answers on the lines provided.

The data collected in this survey will be kept strictly confidential and will only be used for research purposes related to this study.

Please select your age group	18-30 ○	31-42 ○	43-61 ○	62-71 ○	71+ ○
What is your gender?	Male ○	Female ○			

Please indicate the extent to which you agree with the following statements:	**Strongly Disagree**	**Disagree**	**Uncertain**	**Agree**	**Strongly Agree**
	1	2	3	4	5
1. **I am aware that my healthcare organization uses the internet to interact and communicate with patients.**	○	○	○	○	○
2. **I frequently use the internet to research health options.**	○	○	○	○	○
3. **I use the internet on a regular basis to interact with my healthcare provider.**	○	○	○	○	○
4. **I am satisfied with the online capabilities of my healthcare provider.**	○	○	○	○	○
5. **I would like for my healthcare provider to offer more online features such as:**	○	○	○	○	○

- Appointment scheduling
- Communication with medical staff
- Options for learning more about healthcare
- Bill payment functions

6.	**I associate the quality of an organizations health services to the credibility and usability of their online applications.**	☐	☐	☐	☐	☐
7.	**I choose my physician based on whether I can communicate with him/her online.**	☐	☐	☐	☐	☐
8.	**I am interested in using social networking applications, such as Blogs, Facebook, Twitter and YouTube to learn more about my healthcare options.**	☐	☐	☐	☐	☐
9.	**If given the option, I would handle the majority of my healthcare needs online.**	☐	☐	☐	☐	☐
10.	**I think that the internet is a safe and reliable place to store my personal information and documents regarding my health.**	☐	☐	☐	☐	☐

Questions:

1. **What <u>online</u> features, would you use if your healthcare provider offered them? Select all that apply.**

- ☒ Ability to communicate with medical staff
- ☐ Bill payment options
- ☐ Access to health records
- ☐ Scheduling (physician office appointments, medical testing)
- ☐ Registration for classes or screenings
- ☐ Subscribe to health reminders and/or email newsletters

2. **Please list if there are any <u>other</u> online features you would use if your healthcare provider offered them.**

_____

_____

_____

_____

_____

3. **What recommendations do you have that may help your healthcare provider improve communications with you?**

_____

_____

_____

_____

_____

APPENDIX B

EMAIL COVER LETTER

EMAIL COVER LETTER

Please follow the link below to complete a survey regarding your preference in using online health services in an effort to enhance communication and improve medical care for you and your family.

There are no known risks for participating in this survey, and all responses are strictly confidential. The survey should only take you about three (3) minutes to complete.

The results of this project will be used for my graduate research paper to assist the healthcare community in understanding patient wants and needs. Without you and your cooperation, I will not be able to conduct this research project. I hope you will take the time to complete the survey.

If you have any questions about the survey, or about being in this study, you may contact me at kmorg017@odu.edu. Thank you for your time.

Sincerely,

Kimberly D. Morgan
Graduate Student
Old Dominion University

The Human Subjects Review Committee at Old Dominion University has approved this study. If you have any concerns about your rights as a participant in this study you may read about human subjects' participation at the Office of Research website at http://www.odu.edu/ao/research/.

APPENDIX C

FOLLOW-UP EMAIL COVER LETTER

FOLLOW-UP EMAIL COVER LETTER

A couple weeks ago, I sent you an email asking that you participate in a healthcare research project to help determine the effectiveness of health services. As mentioned before, my research will be used to determine what patients prefer regarding online health services in an effort to enhance communication and improve medical care for you and your family.

Below is a link to the survey for you to complete. Your participation is voluntary but needed. There are no known risks for participating in this survey, and all responses are strictly confidential. The survey should only take you about three (3) minutes to complete.

The results of this project will be used for my graduate research paper to assist the healthcare community in understanding patient wants and needs. Please take the time to complete this questionnaire. Without you and your cooperation, I will not be able to conduct this research project. Thank you for your support and time.

You may contact me at kmorg017@odu.edu if you have any questions or concerns.

Thank you for your time,

Kimberly D. Morgan
Graduate Student
Old Dominion University

The Human Subjects Review Committee at Old Dominion University has approved this study. If you have any concerns about your rights as a participant in this study you may read about human subjects' participation at the Office of Research website at http://www.odu.edu/ao/research/.