EVIDENCE ON THE CONTENT OF PHYSICIAN WEBSITES

Maria H. Sanchez, Rider University
Peter M. Sanchez, Villanova University

ABSTRACT

We provide data regarding the current status and trends in physician website development. We surveyed over 200 family practices to determine whether or not they have a practice website. The results indicate that a majority of family practices do not have a website. We then conducted a detailed investigation of more than 60 physician websites to determine what kind of information, features and services are included in the websites. Our results indicate that there is a large gap between consumer preference for physician website capabilities and current websites.

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KEYWORDS: Physician website marketing, internet marketing, website development

INTRODUCTION

This paper examines the current status and trends in physician websites. The internet is a useful tool for service providers to market their services. In the world of health care there is enormous potential for internet use, especially with President Barack Obama advocating e-prescriptions and electronic medical records. The number of e-prescriptions last year nearly tripled from the prior year (Martin, 2010). There is also great potential for physicians to use the internet to communicate with and improve their relationships with patients (Sanchez, 2002). Consumer interest in the internet as a health resource is growing strongly. In a recent survey, more than half of the respondents indicated that they believe that incentives for doctors and hospitals to use electronic medical records will be effective or very effective at improving the overall performance of the health care system (Deloitte, 2010). In addition, current economic conditions are leading to pressure for the healthcare industry to cut costs and to justify every sales and marketing initiative (Gronlund, 2010). Physicians are beginning to understand that websites can be a good, cost effective way to attract new patients, provide better service and patient satisfaction, and maintain patient loyalty.

Some recent estimates say that 80% of American internet users regularly search the web for health information (LSW, 2010). However, there has been little research to help identify the information consumers want in physician websites to help them choose a doctor. Likewise, little research has investigated how websites might improve doctor service. Examining the content of physician websites is important because without a firm understanding of the content of physician websites, it is not possible to make recommendations for improvement. Once there is an understanding of the current status of physician websites, physicians can compare their websites to those others in the same industry and can better design their own websites for improved patient satisfaction and well as improved service and treatment.

We present the results of an investigation into the present status of physician websites. We surveyed more than 200 family practices to determine if they have a website. We then conducted a detailed investigation of over 60 physician websites, including determining if the websites contain the factors and services determined by consumers in a prior study (Sanchez and Sanchez, 2006) to be important. Our

results indicate that there is a large gap between consumer preference for physician website capabilities and current websites. Finally, we present suggestions for future research.

The remainder of the paper is organized as follows. We first review the prior research. Then, the methodology and the results are described. Finally, we discuss the implications of the paper, factors constraining the development of physician websites, conclusions and suggestions for future research.

LITERATURE REVIEW

Recent statistics indicate that over 75% of North Americans use the internet (IWS, 2010). The internet is used extensively for advertising and marketing purposes. However, healthcare providers have lagged behind other industries in use of the internet for marketing and interaction with consumers (Rooney, 2009).

There is ample research on the use of the internet for health related issues. The internet is the primary venue for global health information exchange (Geissbuhler and Boyer, 2006). The majority of internet searches that are health related are for specific medical conditions (McMullan, 2006). Prior research indicates that most people who use the internet to access health information find the information to be both useful and helpful (Shaheen et al., 2008). In addition, most consumers find the online health information to be accurate (Bodkin and Miaoulis, 2007). Prior research has shown that consumers use prescription drugs' websites and find the information on the websites to be credible and comprehensive (Wymer, 2010).

According to recent research by the Pew Research Center, 35% of American adults use the internet to obtain information about doctors or other health professionals (PEW, 2009). There have been numerous articles on the potential for doctor-patient interaction via the internet (e.g. Klein, 2007; Adler, 2008; Bottles, 2009). Many studies indicate that while consumers may want to use the internet and email to communicate with their doctors, only a small percentage of consumers have actually been able to do so (e.g., McMullan, 2006; Bodkin and Miaoulis, 2007). While many articles suggest that consumers want more informative and interactive healthcare websites (e.g., Catallo, 2008), there has been little research to examine the current status of physician websites.

In a prior study, over 300 consumers were surveyed as to their use of physician websites and their preferences as to information and capabilities of physician websites (Sanchez and Sanchez, 2006). In that study, over 75% of the consumers indicated that they visit health care websites every two months or more, but only 37% indicated that they had ever visited a physician practice website. In that study, the participants indicated that ten factors would be important to them when visiting a physician website: Directions/map, office policies (i.e. cancellation of appointments, etc.), insurance plans accepted/payment methods, qualifications/credentials of physicians, practice philosophy, basic contact information (e.g., hours of operation), areas of specialization, forms to complete for first appointment (e.g., medical history), hospital affiliations, services provided beyond routine care (e.g., EKGs, stress tests, etc.). Of these, the consumers rated the following three as the most important when choosing a primary care physician: insurance plans accepted, physician credentials and basic contact information (e.g., hours of operation).

The same prior study identified twelve physician website features as potentially useful to consumers: Making routine appointments online, viewing lab results online, receiving email reminders for preventative care, refilling prescriptions online, participating in online health management programs, online practice newsletter, email consultations with your physician, getting routine HMO referrals online, monitoring vital signs at home and posting to personal webpage for physician review, links to useful healthcare sites, receiving follow-up email reminders after office visits (e.g., medication reminders), and

viewing their own medical history/records online. Of these, in that study the consumers rated as the top three most important: prescription refills online, online referrals, and online access to medical records.

METHODOLOGY

The current study extends prior research by taking the ten factors identified in prior research (Sanchez and Sanchez, 2006) as being important to consumers when choosing a physician and the twelve factors identified as potentially useful to consumers and investigates how frequently they are currently available to consumers on physician websites. In the current study, we randomly selected 208 family practices from the east coast and called them to ask whether or not they have a practice website. Then, for the practices that do have a website, we visited their website to determine what information and services are available on the website. The results are discussed below.

RESULTS

Of the 208 practices surveyed, only 64 of them (31%) actually have practice websites. This is surprising given the high consumer interest in physician websites.   For the 64 practices with websites, we examined their websites in detail. The most common information that was included on the websites were areas of specialization (94% of websites), directions and or map (89%) and qualifications/credentials of physicians (88%). Less than one third of the websites had office policies (re: cancellation of appointments, etc) (20%), hospital affiliations (30%) and services provided beyond routine care (e.g., EKGs, stress tests, etc.) (33%). Table 1 shows the frequency of occurrence of each of the ten factors identified in previous research as being important to consumers when choosing a physician.

Table 1: Frequency of Occurrence of Ten Factors

Website Information	Frequency of	Percentage
Directions/map	57	89%
Office policies	13	20%
Insurance plans accepted	43	67%
Physician credentials	56	88%
Practice philosophy	54	84%
Basic contact information (e.g., hours)	37	58%
Areas of specialization	60	94%
Forms to complete for first appointment	25	39%
Hospital affiliations	19	30%
Specialized services (e.g., EKGs)	21	33%
n=64		

This table shows the frequency of occurrence of ten factors indentified in previous research as being important to consumers. The first column lists how many of the 64 websites investigated contained each of the ten factors. The second column expresses this figure as a percentage of the total 64 websites.

Interestingly, basic contact information was rated by consumers as one of the most important factors to be included on a website when choosing a physician, yet only 58% of our sample with websites had that information on their website.

Consumers rated insurance plans accepted as one of the most important factors, and yet only about two thirds of our sample (67%) with websites included this information on the website. We found it surprising that more physicians did not include this information since it would likely be one of the first questions a potential patient would have. The majority of physicians in our sample did include their practice philosophy on their website (84%).

A simple idea that has the potential to save physician practice employees time is to have the necessary forms to complete for the first appointment online, and then patients can print them and fill them out, then bring them to their appointment. However, only 39% of our sample offered this Table 2 shows the frequency of occurrence of the twelve physician website features/services potentially useful to consumers. Prior research indicates that all twelve of these services potentially influence consumers' satisfaction with their physician. However, all of these twelve services were either rare or nonexistent. The most commonly present feature is links to healthcare sites (44%).

The two next most common features are ability to make routine appointments online (19%) and online practice newsletter (17%). In prior research, consumers rated the following features/services as most important to them: prescription refills online, online referrals, and online access to medical records. However, these three features/services were some of the most infrequently occurring: prescription refills online (5%), online referrals (0%), and online access to medical records (3%). Only a very small portion of the websites we investigated offered online health management programs (3%) and the ability to view lab results online (3%). None of the websites we investigated offered at home vital sign monitoring.

According to the Wall Street Journal, some health insurers, including Aetna Inc. and Cigna Corp., now pay doctors to treat patients virtually (Mathews, 2009). However, in our sample of physicians with websites, only 6% of them offered email consultations. None of the websites in our sample offered follow-up email reminders after visits and none offered email reminders for preventative care.

Table 2: Frequency of Occurrence of Twelve Features/Services

Website Services	Frequency of	Percentage
Making appointments online	12	19%
Viewing lab results online	2	3%
E-mail reminders for preventative care	0	0%
Refilling prescriptions online	3	5%
Online health management programs	2	3%
Online practice newsletters	11	17%
E-mail consultations with physicians	4	6%
Online referrals	0	0%
At home vital sign monitoring	0	0%
Links to healthcare sites	28	44%
Follow-up email reminders after visits	0	0%
Online access to medical records	2	3%

n=64 This table shows the frequency of occurrence of twelve features and services indentified in previous research as being important to consumers. The first column lists how many of the 64 websites investigated contained each of the twelve features/services. The second column expresses this figure as a percentage of the total 64 websites.

DISCUSSION

We found the number of practices without a website to be quite surprising, especially given the demand for it from consumers and also the ease of creation. There are many companies that will create a website for physicians. These companies will do everything including design the website, design a logo, host the website, manage the website, create online patient forms and online bill pay, and the companies even promise to make the website rank high on search engines such as Google.

In addition, some physician organizations have programs in place that allow individual physicians or practices to build a website. For example, the American Academy of Orthopedic Surgeons, as a benefit of membership, allows physicians to create websites that have a photograph, educational background, information on board certification, focus and affiliations, office location(s), hours of operation, and insurance plans accepted. On the website, the physician can include a personal message that describes the

practice and practice style, a Google map of the primary office location and other information (See http://orthodoc.aaos.org/pows.cfm.)

Although physician websites are here to stay and likely will play a greater role in health care delivery in the future, it is apparent that much more development needs to take place in this area. While it can be said that physician websites currently play some useful but limited role in our health care system, the small percentage of practices having websites is surprising when compared to website development in other fields. Moreover, the sophistication of the websites we reviewed is woefully inadequate given both consumer preferences and the capabilities of website technology. Our impression of many of the websites we researched is that they are merely little more than online replications of printed materials such as office brochures. Websites varied greatly, and it appears to be entirely up to the physician as to what information they choose to disclose on their websites. Few offer interactive capabilities that are likely to improve consumer satisfaction and lead to greater efficiency in health care delivery.

FACTORS LIMITING THE DEVELOPMENT OF PHYSICIAN WEBSITES

Anecdotal evidence uncovered in the course of our research indicates several factors limiting the development of physician websites. First, many physicians are yet unconvinced that website technology can improve their ability to deliver health care more effectively. For most physicians, website technology represents a dramatic shift in the point of care and the subsequent reduced need for patient contact. Here, behavioral changes will be required both on the part of physicians and consumers.

Physicians will need to overcome their broad generalization that quality of care will be reduced with less patient contact. They will need to learn which aspects of their practices can be adapted to website technology. Most physician-patient interactions will still require "hands on" physician contact. Yet many interactions can actually be improved with website technology. For example, patients requiring long range therapies such as blood pressure monitoring can be sent periodic email reminders regarding the importance of taking their medication according to the physician's orders.

This may actually improve compliance, the lack of which is a common problem with long range therapies. Furthermore, the technology now exists for patients to monitor their blood pressure at home and have the results transmitted electronically. This eliminates the need for frequent office visits for routine monitoring. Patients also will need to undergo behavioral changes in order to effectively make use of website technology. For example, while physician email consultations can be useful, patients will need to learn the limitations of such contacts. In short, website technology is still in its infancy as far as the abilities of both physicians and patients to use it effectively.

Another factor related to the previous is physicians' concerns for their bottom lines. The current belief among many we surveyed is that developing, operating, and maintaining a website will not be cost effective. Here physicians will have to look long range. While initial start up costs may be significant since they include not only development of the website but staff training as well, the longer range benefits are apparent. Not only is there the potential to reduce errors since patient records can be electronically stored and transmitted among many providers, but the potential to reduce the need for staff is significant. Several physicians we encountered commented that they require four to five staff members just for scheduling appointments, answering phones, HMO referrals, and prescription refills. These are, in fact, relatively minor transactions which have the potential to be handled with website technology.

Physicians were also concerned with privacy issues and the perception of increased medical liability. Many believed that the transmittal of sensitive medical information electronically raises the potential for

unauthorized third parties to gain access to this information. We believe this to be largely a perceptual issue since no evidence exists that this has been the practice. Indirectly related to this issue is physicians' concerns with the potential for increased medical liability for medical errors related to website transactions. Here again, there is no evidence that this has occurred, although it is an important question which will be required to be addressed.

Finally, many physicians also indicated that they saw no immediate need for websites since most of their patient profiles included older population segments without much exposure to internet technology. Some physicians we spoke with expressed concern that they would not be reimbursed for electronic doctor-patient communications. Moreover, many patients are ingrained with a more passive role in their interactions with health care providers. For them, face-to-face contact with physicians is likely to remain their preferred method of seeking medical treatment. In the near future this is likely to change as the more educated and technology savvy baby-boomers retire and approach the years where they require more health care.

CONCLUSION AND FUTURE RESEARCH

The goal of this paper was to examine the current status and trends in physician websites. We surveyed more than 200 family practices to determine whether or not they had a website. Only 31% of those surveyed actually have websites. For those practices who do have a website, we examined the websites in detail. We searched for ten specific factors and twelve specific features/services that were identified in a prior study to be important to consumers. We found that most websites lacked many to most of the factors and features that consumers desire. Some of the websites even lacked basic information such as directions or a map to the office. We did not encounter a single website that had all of the information and capabilities that consumers have indicated they would like.

This study is limited in that the sample consisted of only approximately 200 family practices in the east coast. Clearly, there is a need for much more research in the area of physician website marketing. Future research could investigate differences between urban and rural practices, as well as the differences between specialties and larger versus smaller practices.

Other research questions include: How can we convince physicians that practice websites can improve their bottom line as well as improve health care delivery? Would consumers actually utilize website technology in seeking health care? Can concerns such as privacy and medical liability be overcome? Will social media such as Facebook and Twitter be useful tools for physician marketing? We hypothesize that the benefits offered by website technology are too powerful to preclude rapid future development in this area.

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BIOGRAPHY

Maria H. Sanchez is an Associate Professor of Accounting at Rider University. She received her Ph.D. in Accounting and her MBA from Drexel University and her Bachelor of Science in Accountancy from Villanova University. Her research primarily focuses on decision making and decision maker behavior in accounting and auditing contexts. She can be contacted at Rider University, 2083 Lawrenceville Rd., Lawrenceville, NJ 08648, US. Email: msanchez@rider.edu

Peter M. Sanchez is a Professor of Marketing at Villanova University. He received his B.S. and M.B.A. from Penn State University and his D.B.A. from Kent State University. His research interests include health care marketing and the role of marketing technology in health care delivery. He can be contacted at Villanova University, 800 E. Lancaster Ave., Villanova, PA 19085, US. Email peter.sanchez@villanova.edu