Abstract

Social networking for healthcare is used by many of the different participants in the healthcare system. The motivations for using social networking differ depending on the participant. In this paper, the distinct types of social networking for healthcare and the user groups that are associated with them are defined. There are three distinct emerging user groups in social networking for health care. These three user groups are identified as doctor to doctor (D2D), patient to patient (P2P) and doctor to patient (D2P). Each of these distinct user groups has different objectives for using social networking for healthcare. They also have unique benefits and issues for each type of social networking for healthcare as well as having some in common.

1. Introduction

Social media and social networking in healthcare have evolved and matured over time with many forms of participation and contributions from the different stakeholders within health care. Broadly, social media has been used in health care as a communication channel to inform, educate and promote knowledge exchange among the different participants within health care [1, 2]. Over the years, social media in conjunction with the patient’s ability to surf the Internet have been the major forces in a more patient centric model for health care [3, 4, 5].

Social media enables diverse forms of social connectivity among different stakeholders electronically [6]. Web 2.0 (from which medicine 2.0 has evolved for the health care sector) is another term for social media. Medicine 2.0 has been defined as the use of healthcare services that are electronically based for different stakeholders, such as doctors, patients, and caregivers [7]. As social media for health care evolved, the different participants within health care have found and created new and valuable ways to use it.

To date many researchers have studied social media as a whole on how participants use it [8, 9]. The use of social networking has enabled participants to connect and collaborate as a group on the different healthcare issues [10]. With the use of social networking in health care, it has been purported to bring and extend certain benefits for and to the participants. For example social media participation is expected to improve healthcare delivery while reducing costs [7]. The ability to share and create knowledge by the participants in the healthcare system is intended to improve the relationships between the different groups [7]. One key reason for such an observation is that the sharing of knowledge, which is paramount to social networking in health care, is facilitating the increase of medical knowledge through communication and collaboration of the healthcare professionals [1]. The benefits that social media bring to health care generate an overall improvement through better communication through the various forms of social media.

The studies involving social media for health care have discussed the topic of social networking as an aspect of social media, but not separately [1, 6, 9]. The use of social networking in health care is a significant portion of social media with the need to understand it in more depth. The understanding of who the participants are within the healthcare system and how the different groups use social media has not been scrutinized. As social networking in health care has become more common, the need to understand and define the how and why individuals use this form of communication needs to be more fully understood. By knowing who the different communities are and how they interact within social networking for health care, the different types of social networks in health care can then be more clearly identified.

In this paper, the emerging types of social networking in health care and the user groups that are associated with each will be defined. A brief
discussion of the types of social networking in health care will first be examined. Then the individual types of social networking in health care will be analyzed, more specifically, looking at the different aspects of their respective development such as the opportunities, and issues associated with them.

2. Types of Healthcare Social Networking

In the healthcare system there are many different participants. These participants range from patients and caregivers, to the healthcare professionals within the system. A few of these healthcare professionals are the administrative staff and the healthcare providers, such as physicians, nurses, pharmacists and others.

Three distinct groups of participants in social networking in health care have emerged. These distinct groups have different motivations for using social networking in health care. The motivations for using social networking is dependent on the user group themselves.

Interestingly, the respective user groups may define and inform the types of social networking sites (SNS) in health care. There are three distinct emerging user groups in social networking in health care as identified in this paper. The first being doctors that are using SNSs to connect with other doctors, which we will refer to as doctor to doctor (D2D). The second classification is the doctors using social networking to connect with patient, which will be referred to as doctor to patient (D2P). The final classification is the group that consists of patients to connect with other patients, which will be referred to as patient to patient (P2P). For each of the aforementioned classification, there are many different SNS available as shown in the table below. Examples of the different SNS for each type are also noted.

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The D2D groups that comprise of doctors only tend to use SNS for knowledge sharing. Doctors tend to use SNS to create and disseminate medical knowledge. Many of the sites such as Doximity are used to confer with other professionals about patient’s medical issues. These sites are used in the same way in which many doctors would confer with their colleagues face to face, just without the geographic limitations.

The P2P groups that consist of patients use SNS for knowledge about a specific disease or illness and also emotional support. With this group they are looking for peer support to aid in understanding of their medical condition and the other non-medical issues that come with having the disease/illness.

The D2P group is a combination of doctors and patients. Doctors offer expert opinions in regards to specific diseases, illnesses and tests. Patients use the site to gain an understanding of their disease through opinions of both their peers and the experts. These SNSs also have areas in which patients can find emotional support from their peers.

3. Doctor to Doctor (D2D) SNS

3.1. Definition of D2D

A D2D social network site is designed for the explicit use of physicians. It is a forum in which physicians’ bring together their common knowledge along with their individual experiences and specialized knowledge to embed and share within the community on the SNS.

3.2. Objectives and Benefits of D2D

The objective of D2D is to create a forum that is safe and secure environment to share information on medical treatment among doctors. There are several objectives that doctors have when using these types of SNS. They are being empowered to confer with other doctors, share their knowledge and research, and have the SNS be used as a tool for teaching and research.

Doctors are motivated to use D2D SNSs to confer with other doctors for best practice and they are using social networking to share health information, communicate and network with colleagues, and to publicize their research that can be quickly viewed their colleagues [11]. The main motivation is to share information to create a larger more diverse body of knowledge regarding health care. As social networking is becoming more popular and there are a growing number to choose from, more doctors are beginning to use SNS for professional reasons.

3.2.1. Crowd Sourcing

The largest impact that that social networking has is the ability to confer with other
Doctors. Social networking for doctors has doctors to crowd source for answers to common and not-so-common clinical questions [11]. Crowd sourcing is the creation and collaboration of a ‘crowd’ of intellectual assets, knowledge, to create a body of knowledge or solve a problem [12, 13]. In a recent study by Antheunis, Tates & Nieboer (2013) [1], it was found that Doctors used social media to extend their network of colleagues and updating these colleagues regarding their present work. Doctors use SNS to share healthcare information, communicate and network with colleagues [1, 11].

Doctors may learn medical knowledge from training and own clinical practice and experience. However, their knowledge may be out-of-dated and may not be adequate to deal with unseen difficult cases. Crowd sourcing allow doctors to share most up-to-date knowledge and other doctors’ best practice and experience with specific cases. Using powerful searching tool, doctors can also use crowd sourcing to confirm their diagnosis and treatment.

Doctors bring their common knowledge along with their individual experiences and specialized knowledge to share and disseminate within the community. This shared knowledge becomes embedded and shared within the online community. Doctors have two types of knowledge that they have learned from text books and research studies and the other is learned while practicing medicine, with some of this knowledge not readily available in another form such as text books, research studies, etc. This increase in the embedded knowledge within the SNS reduces the potential for participants within the group of having information overload, as the information is readily available from either the historical text or the group members [14].

As this information is created and stored within the community in the form of learned information in the group and recoverable texts, it helps increase the knowledge base to treat patients. This increase in the base of knowledge also reduces the possibility of another doctor not having access to the information for the best possible treatment for the patient. The reach of the online community is not geographically hampered such that the experiential and learned knowledge of individual doctors is now available and accessible no matter their physical location.

3.2.2. Online Consultation

Doctors are willing to use SNS as a medium to consult with their colleagues on different healthcare questions or issues [1, 11].

The use of SNS for consulting with other doctors has several advantages: to reach a big pool of experts, to overcome location and time limitations, and to be specific for the problems.

3.2.3. Use as a Teaching-Learning Tool

Social networking is an effective tool for teaching and learning for doctors. The amount of knowledge required to care for patients is ever expanding so that the use of SNS to provide new information is an effective means or tool [6]. Social networking has been found for doctors to keep current with new and improved methods of or alternative modalities for patient care [6]. More recently, a study reported that those doctors that use social networking feel it helps improve the quality of care for their patients [6].

Some of the SNS for doctors are used as teaching tools. Such is the case for Figure 1. Several different medical programs use Figure 1 as a teaching mechanism, by either posting pictures of medical conditions for students to comment on or by having students use the site to find images of specific diseases or conditions [15].

3.2.4. Ability to Publicize Research

Doctors found that social networking was a way in which to publicize their research while viewing research by their colleagues [1, 11]. Much of the research produced is compiled in numerous journals. Many doctors lack the time or inclination to keep abreast of all the different research findings. Doctors that publish their research may find that others are not aware of their findings as it may be hidden within the many articles produced. These doctors can use the SNS to give brief accounts of their research and its findings.

Using social networking to disseminate the research findings can increase the knowledge of the general SNS community. It also can bring awareness to the latest research that is available, which may entice doctors to investigate further if it pertains to patient issues or new treatment methods.

3.3. Issues of D2D

There are several issues for doctors using D2D SNS. They include the ability to trust the information posted, privacy and security of patients’ healthcare information, legal constraints and other issues, and the ability to maintain a professional image when using SNS for D2D. Many of the SNS for D2D have been created to alleviate some of the risks associated with its use.

3.3.1. Privacy & Security Issues

A major risk of using social networking is the legal implications [16]. Doctors have legal requirements to protect patient privacy and to keep their medical records secure. Other legal issues
surround giving of medical advice, discussion of proprietary information and intellectual property rights when opinions and research are being shared.

Most countries have some form of legislation that protects patients’ rights to have their healthcare information kept private. As an example, in the U.S. privacy rules regarding patient healthcare information are addressed by HIPAA [16]. With the legal implications of patient privacy doctors and the SNS they use are ever vigilant about de-identifying information that could identify a patient. Most sites leave it up to the poster to ensure that patient privacy rights are adhered to. Some sites such as Figure1 state that patient’s permission is needed before images of that patient can be posted. As well, Figure1 has created software that automatically removes facial features of patients and supplies tools for the removing (covering) any identifiable traits on the patient (tattoos, jewelry, scars etc.).

Doctors are legally and morally responsible for protecting patient’s privacy rights. They must treat patient records as confidential documents that need to be kept secure and private. Breaches in confidentiality can cause a doctor to be civilly liable to patients, result in job loss, and disciplinary actions by the medical boards they are affiliated with [15].

Many of the institutions that doctors are employed or affiliated with have policies in place regarding social media. These policies can define which SNS can be used by individuals, and when they can be accessed. Some institutional policies do not allow for the access of SNS while preforming patient care or when working in the medical institution. This can create difficulties for some as specific SNS are used for conferring with their peers on patient care.

Institutions have social networking policies to protect themselves from legal implications such as the sharing of private or confidential information. Many of these institutions can have costly penalties imposed on them for not complying with the privacy and security rules imposed by the jurisdiction [17]. These same institutions use the policy to give guidelines that aid in the protection of their image.

Many of the doctors have migrated to specialized SNS that define the ownership of proprietary information. This defining of who owns the image or the text that is shared in some cases is more transparent; in others, it may still be well hidden within the many documents that users seldom read. As many websites act like a “closed community” even though ownership of the content shared is not easily discernible, the content is better protected from the general public. These closed communities that have verified the users credentials, allow only users that are morally bound by the same code of conduct for patient welfare.

3.3.2. Trust

As the SNS are mainly used for learning and informational purposes by the doctor, the information that is posted needs to be trusted. The qualifications of those posting information need also to be trusted. When doctors began using SNS to confer with each other about patient care, they had to accept that the qualifications another poster stated they had were true. With having to accept one’s qualifications without verification, some of the information may have been deemed suspect and discounted. Or, in other cases, the doctor tried to verify the medical information posted only to find that it was erroneous and potentially harmful to the patient. The need to verify doctors’ credentials is seen as helpful as most healthcare professionals have a duty not to harm patients. With the verification of posters’ credentials, the trust in the information posted can be seen as less questionable.

Several of the sites for healthcare practitioners validate their credentials. The validation of the users’ credentials enables assurance that opinions are actually from qualified individuals. Doximity is a SNS, similar to LinkedIn, which checks the credentials of all potential members. Doximity is only available to physicians, medical students and clinically practicing healthcare providers [18]. Sermo also verifies credentials before users are allowed to post on the site [19]. Figure1 uses the honor system for users to report their own credentials; if the users wish to have their profile elevated, they can volunteer for their credentials to be validated.

The validation of credentials before membership allows users to trust that the information is medically valid. With the ability to trust individual’s medical knowledge, conversations are less guarded and free exchange of ideas can happen. The fact that members’ credentials are verified decreases the risk of physicians being liable for harm to patients. The increase in the reliability of the information gives other members more faith in its accuracy or at the very least that it will not harm the patient.

3.3.3. Maintaining a Professional Image

Another issue with social networking is how to incorporate it into use while still maintaining a professional image as doctors are worried about the negative repercussions if they publish unprofessional content [20]. Many doctors are taught standards for professional conduct during their studies with the expectation that these codes for their professional conduct are being upheld [10]. Many of these
programs have not addressed some of the new issues that have developed due to the use of social networking. Different medical organizations and educational institutions have developed guidelines for ethical and professional behavior [10]. As well many healthcare institutions have policies about the use of social media, including social networking, by their employees.

A criterion for professionalism is to not misrepresent the individual’s credentials. This has been the most common issue. Misrepresentation of an individual’s credentials has been reported to the different state medical boards with many having serious disciplinary action taken on them [10].

4. Patient to Patient (P2P)

4.1. Definition of P2P

P2P social networks have been defined as, ‘online social networking communities where patients can connect with each other around shared medical conditions’ [21, pp.200]. These SNS offer a combination of both information and emotional support.

4.2. Objectives and Benefits of the P2P

Individuals are motivated to join these social network sites for either informational or emotional support or both [22, 23].

4.2.1. Informational Support

The use of social networking for health care can give patients the information they want to actively participate in self-care or beyond. Patients actively seek out information about different treatments and the results from others within the SNS community [24]. Word-of-mouth (WOM) is used by these SNS. WOM is defined as consumer generated content that is posted on a web site or mobile site [25]. Patients post their expertise on such topics as their symptoms, the physician and the hospitals they interact with. Many patients are posting information about their treatment, along with information about the overall quality of the care they have received by doctors and hospitals [4]. This enables members to assess the level of care among doctors and hospitals, thereby enabling members to decide with whom and where they may access health care.

These P2P SNS can be very general such as Inspire or very specific as Crohnology is. Inspire is a site which offers member many different communities to interact in that have a focus ranging from addiction to rare diseases. Crohnology is a site for individuals with Crohns disease. Patients with rare diseases have the ability to seek out a mobile community that can share relevant information with each other. This combined shared information can create a large body of knowledge to aid in treatment and management for patients. As is the case with Crohnology, the combined knowledge of patients has found that certain foods, such as beer, create discomfort and the site recommends avoiding those foods [26]. The SNS does not use one individual’s finding but compiles a list of foods that frequently create issues for the members with Crohns disease. Crohnology compiles member’s information to increase the body of knowledge regarding the disease.

The SNS for specific diseases and chronic conditions may have a vast knowledge of the disease that will help educate the members. This knowledge in the community may be put into non-medical terms, which the community members are better able to comprehend.

4.2.2 Psychological Support

Three types of support that SNS for health care for patients tend to have within the communities include emotional, esteem, and informational support [24]. Both the emotional and esteem support are used to bolster the members’ psychological wellbeing. The SNS offers patients implicit emotional support by giving them a venue to create a personal profile, record their health information and understand how other non-medical professionals describe the same medical conditions along with their symptoms, including what works for them to remedy the symptoms or the medical condition [22]. Emotional and esteem support are explicitly offered via the SNS for healthcare through the interactions with other members [22, 24]. There is a difference between esteem support and emotional support although both are similar. Emotional support given is in the form of empathetic messages, and this tends to be the most helpful for those that are struggling with their disease and issues associated with it [24]. In contrast esteem support is the compliments and praise offered to members on their ability or attributes to cope with the challenges of their disease [24]. The social connection from the SNS gives the patient a community that understands the issues that is able to give nonjudgmental support. These SNS are also able to suggest solutions to problems that members are experiencing that others have already encountered.

4.2.3. Patient Empowerment

There are many benefits associated with P2P SNS. A key benefit is patient empowerment gained through information and social support [27]. In the study done by Johnston et al. (2013) [27] it was found that patient empowerment was directly linked
to the ability to extract useful information from the SNS [27]. A more informed patient with a large social network results in a more empowered patient [28]. Patients are able to quickly and easily access medical information through SNS that previously was not easily accessible to them [28].

Many of these patients can bring new information to the attention of their healthcare provider to aid in the collaboration for disease management and self-care. The information found within the social network has an impact on how patients interact with doctors. The information gained by membership on the social networking sites enables patients to be more proactive in their self-care.

4.2.4. Patient Involvement

This ability of the community to compile their collective knowledge in layman terms that members can understand enables patients to be empowered, giving them more control over their self-care. The ability to connect with other patients for information is especially beneficial to patients that have rare diseases [4]. Many patients that have rare diseases are geographical isolated from other patients that have been diagnosed with the same disease. This type of social network is very beneficial to these patients as it is a way to connect with others that have the same disease and are experiencing the same issues. With P2P social networks, many patients through interacting with others on the site become the expert on the disease and begin to educate their doctors, by being able to highlight research and different treatments that have been found effective.

An increase in patient involvement aids patients to actively manage their health and healthcare needs. A more informed and engaged patient leads to an increase in one’s ability and willingness to manage one’s own health, thereby leading to an increase in one’s wellbeing.

4.2.5. Patient-Centric Care

The use of social media, including social networking, has supported the healthcare delivery model to become more patient centric. A key component of patient-centric care is the engagement of the patient in their care [4]. Social networking is a tool in which patients can actively participate in their care, by sourcing out information and gaining an understanding of their disease.

4.2.6. Connections

SNS for P2P create social connections between patients that have the same health issues. These social connections secured via SNS help alleviate some of the social isolation that some patients faced.

As noted, many patients that have rare diseases are geographically isolated and the ability to connect with others for support is especially beneficial for those who may have rare diseases [4]. P2P social networking therefore benefits the patient as it is a way to connect with others that may have the same disease and are experiencing similar issues.

4.3 Issues of P2P

There are several issues involved with using SNS for health care for patients. They involve security and privacy issues, as well as being able to verify and confirm that information is correct and used correctly [29].

4.3.1. Privacy

Many individuals have stated that concerns on privacy and confidentiality create barriers to their using SNS for health care [30]. As well many users of SNS are too willing to share personal information that may be prudent. Some of the members of different communities have regretted on overly disclosing their identifiable personal information. With much of the information posted unable to be removed or deleted when the member has had time to assess if sharing such personal information is warranted, it is important to exercise care in personal information disclosures.

4.3.2. Accuracy of Information

The benefit of access to large amounts of information about diseases and chronic conditions has some issues associated with it. Some of the information may be incorrect, or is simply incomplete. For most members it is difficult to verify the accuracy of the information [31]. False or incorrect information posted may be detrimental to an individual’s health if treatments are advised. If advice is followed and has caused harm there is very little legal recourse for the members. Some of the members may not be able to understand the information completely due to different barriers such as language, education, or cognitive ability.

4.3.3. Trust

There is an inherent risk that members of the online community may not be truthful about their reasons for being a member. Most of the SNS for health care for patients does not validate the users before allowing them to secure membership status. The members’ intent is unknown as not all the members of the community are trustworthy. There have been numerous incidents reported where online communities have been duped into believing a member only to find out later that the information posted is not true.

4.3.4. Misuse of Information for Healthcare Purposes
Another issue is all the available information that enables members of these communities to self-diagnose and treat themselves for the wrong disease or a disease that they do not have [31].

5. Doctor to Patient (D2P)

5.1. Definition of D2P

The D2P is a SNS that has attracted both doctors and patients as participants. Doctors have various degrees of interaction with patients by blogging, answering general questions posted, or having a secure private conversation with individual patients. Patients gain clinical knowledge as well as emotional support from the community [32] may also have the ability to gain social connections with other patients for various forms of support.

5.2. Objectives and Benefits of the D2P

5.2.1. Physician Perspective

The objective of doctors here is to be able to communicate with patients more efficiently, to aid in the collaboration with patients in the hope that they will better adhere to their treatment regime [28]. Doctors also will have the ability to disseminate information that is accurate and timely to patients.

The objective of the doctor is to engage and educate patients. Patients have the ability to question doctors regarding concerns that arise in a timelier manner instead of waiting until their next doctor’s physical appointment. This creates a different dynamic between patient and the healthcare provider than what is allowed in the traditional model of health care [33].

Doctors now have the ability to educate their patients about different diseases and treatment methods using SNS [28]. This will tend to create better-informed patients.

5.2.2. Patient Perspective

Patients’ objectives in using D2P are similar to that of using P2P in that they join for both the informational support and the psychological support that the D2P offers.

The other objective that patients have when joining a D2P is the connection it gives to the medical system [30].

5.2.3. Information Accuracy

The accuracy of the healthcare information on these SNS in regards to health care is a benefit in and of its own. These D2P SNS are normally affiliated with a medical group or institution, for example the Mayo Clinic, such that credentials of healthcare professionals are verified and apparent to the group or institution. The patient is better able to verify that the information is correct and complete when a healthcare provider is giving the information. The information is better trusted as the credentials of the poster are known and able to be verified for the doctors [1, 33].

5.2.4. Supports Patient-Centric Care

The use of D2P aids in patient-centric care, which essentially is based on eight principles that are’(1) Respect for patients’ values, preferences and expressed needs (2) Coordination and integration of care (3) Information, communication, and education (4) Physical comfort (5) Emotional support and alleviation of fear and anxiety (6) Involvement of family and friends (7) Transition and continuity (8) Access to care’ [34, pp. 172]. Those principles that are supported by D2P are information, communication and education, emotional support, and access to care.

5.2.5. Increased Patient-Doctor Collaboration

A benefit of using D2P for communication between the doctor and patient is that it is readily accessible and timely. Patients do not need to wait until an office visit to ask questions regarding their health and treatment. This increases the collaboration between doctor and patient, which leads also to many other benefits.

A benefit from this collaboration is the patient’s ability to ask questions, or find the answers when the patient seeks specific information. This may reduce their anxiety about their medical condition.

5.3. Issues of D2P

5.3.1. Healthcare Information Privacy

One of the risks with D2P for doctors and patients are the privacy and security risk of patient information and the legal liabilities that the organization and doctors can be subject to. On D2P the privacy and security of patient information cannot be as rigorously defended as on D2D. Doctors who are ever cognizant of their duty to protect patients’ privacy rights will adhere to not posting private information or information that could identify a patient. This cannot be said for some patients who tend to post information of a private nature [33]. Some of the SNS monitor patients’ posts and take them down in the best interest of the patient if they deemed to be sharing private information. As privacy is a legal right for patients these types of SNS need to be ever cognizant of the issue and vigilant even if the patients are not.
5.3.2. Information Misuse for Self-Care

The misuse of the available information for patients to self-diagnose and treat themselves is a risk [31].

5.3.3. Legal Liabilities for Doctors

The D2P may also be legally liable for providing inaccurate medical knowledge if it harmed one of the members. Therefore it has a legal obligation to provide the best medical knowledge available. The site may also have a legal obligation to those who take the information out of context and are harmed by either self-diagnosing themselves and/or using the wrong treatment for themselves or a loved one.

The doctors may be hampered by legal and moral constraints when discussing issues in an open forum, such that they may not give their true opinion.

5.3.4. Funding & Time Constraints

Another risk is the amount of time a doctor is expected to spend updating and answering patient’s questions. Many doctors work excessive hours and would need to put in even more time to maintain a virtual presence on the D2P. Not only is time spent on the SNS an issue for doctors, but how they are going to be remunerated for their time spent consulting/teaching patients on the SNS [10].

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6. Conclusion

Three emerging types of social networking for health care were identified. These can be defined primarily by the composition of those participants using the site. These different forms of social networking for health care have different functions and the motivation for using them. Although all of the types of SNS for health care have the main motivation for better treatment and care of patients. As noted, understanding the different aspects of SNS for health care, along with the rationale underlying their development and uses is important to define the next generation research in health care social networking.

7. Future Research

There is a large amount of research done in regards to patients using SNS for health care. The major theme of this body of research is to analyze how the patients are using the SNS [23, 31, 35, 36]. Some of these articles have analyzed the type of support the patients receive via SNS and what types of support aid in the empowerment of patients [22, 27, 37]. At this point little is known on how this patient empowerment impacts on the patient wellbeing or how it impacts on the patient-physician relationship.

A few studies have tried to identify patient’s interest in social media and the demographic characteristics of those using social media for health care [30, 37]. These studies have identified some of the participants. Additionally, a study of motivations and barriers of use of social media has just skimmed the surface as being a good first step to understand the issue [1]. Further study is needed to understand the motivation to utilize such sites and the barriers to use; especially if it is found that SNS for health care impacts patients’ health positively.

An understanding of how and why physicians are turning towards social networking has been noted in the extant literature with the majority of the articles defining how doctors are using social networking [10, 25, 28]. As well some papers try to explain why doctors are using SNS and the benefits they have found [6, 25]. As more doctors begin to use SNS an understanding of the benefits they perceive as well as the issues they encounter needs to be recognized. Furthermore, the impact to patient care for doctors that use SNS for consultations and learning should be further analyzed.

Very little literature exists at this point in time that relates to how the interaction between healthcare provider and patient changes due to the interactions via the SNS for healthcare providers and patients. Do these networking sites create their own issues, how are the interactions perceived by the different stakeholders, what are the benefits and risks or issues from the different stakeholder perspectives.

The literature regarding healthcare provider and medical institutions legal requirements is fairly extensive, from the legal guidelines to the legal briefs and the scholarly papers written regarding them [16, 36, 38, 39]. Although there is a large body of literature pertaining to the legal requirements for the healthcare system, few have identified how this is and will impact on social networking for SNS especially the type that have both doctors and patients as active participants.

8. Bibliography

[34] Lober, W.B. and Flowers, J.L., “Consumer Empowerment in Health Care Amid the Internet and Social Media”, Seminars in Oncology Nursing, August 2011, pp. 169-182.