

Strategic Advantages of Social Media within Healthcare Business Activities: Organizational Practical Implications, Laws, Regulations and Theoretical Concerns

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Abstract— This article reviews the strategic advantages of Social Media (SM) within the borderless healthcare functions including the role that healthcare organizations are playing in leveraging SM platforms as part of their strategic business model. This is followed with several case studies highlighting both international and local organizations use of SM to support their healthcare business activities. Next, the concerns for healthcare organizations and health practitioners when it comes to marketing on SM are also discussed particularly the SM issues and challenges surrounding the healthcare business activities followed with suggested guidelines as way out from this cumbersome problem. Theoretical views from four leading ethical theories; Kantianism, Act Utilitarian, Rule Utilitarian and Social Contract Theory (SCT) towards the approaches to business ethics respectively using the SM as strategic advantages within the healthcare business activities will also be discussed in detail and to decide whether the act is ethically accepted by the ethical theories highlighted. The final section of this article will analyze some of the international and local policies as well as laws that govern the use of SM within the healthcare business activities including the Malaysia Cyber Law Acts.

Index Terms—Social Media (SM), healthcare business activities, laws and regulations, theoretical concerns

I. INTRODUCTION

People are relying heavily on rapid technological advancement in searching for medical information replacing the traditional face to face medium due to numerous reasons and today, the healthcare industry is beginning to take advantage of the potential of social media (SM) due to the changing trends among health consumers in healthcare seeking. The SM, technically described as “electronic tools that enhance communication, support collaboration and allow users across the globe to generate and share content” [1]. SM greatly relies on its user generated content which has been found to be more effective than traditional marketing communications in influencing the attitudes and behaviors of other users [2] It takes on many different forms including magazines, internet forums, social blogs, microblogging, wikis, social networks, podcasts, photographs or pictures, video, rating and social bookmarking. In 2014, the largest social network is Facebook and other popular networks

include Twitter, Instagram, LinkedIn, and Pinterest [3]. Increasingly it is reported that organizations including the healthcare industries are keen to capitalize on social platforms such as Twitter, social CRM, blog, online community and YouTube to engage with existing and prospective customers, reinforce brand messaging, and provide targeted offers and services to customer [4].

II. SM IN HEALTHCARE

The healthcare industry is beginning to take advantage of the potential of SM where across industries sophisticated organizations are now committing both time and money to their SM marketing campaigns. The transformation of information gathering and the emergence of the engaged patient has demonstrated the increased importance of SM in the broader healthcare context. Thus it is becoming increasingly important for the healthcare industry to be able to react quickly and decisively to events on SM. Patient-centered care is at the forefront of SM use within the industry. Hospitals and other healthcare organizations have begun to turn toward online SM to help get their message out and connect with patients. As healthcare moves into a new era of empowered patients, social searches, such as Google, Bing and social networking sites for instance Twitter, Facebook and Instagram are becoming more important as these are among the most commonly-used SM sites among users. These tools help hospitals share personal connections with the community and patients they serve. Many say an increased understanding of SM within the industry can help drive innovation. Hence the healthcare professionals, regulators and pharmaceutical manufacturers all need to overcome their reticence and acknowledge the vital role that they can and should play as participants in the healthcare conversation. In 2008, it was reported that 34 per cent of consumers use SM to search for health information, on a report on How America Searches: Health and Wellness involving 1,084 adults [5] and over 40 per cent of respondents in a survey by National Research Corp. rely on social networking for health info. Nearly all of those people (94 per cent) turn to Facebook [6]. A survey of 1,060 U.S. adults in 2013 by the PwC Health Research Institute found that one-third of respondents

considered SM platforms appropriate for the discussion of healthcare. Looking at the percentage of healthcare stakeholders approximately 26 per cent of all hospitals in the U.S. participate in SM and 31 per cent of healthcare professionals use SM for their professional networking. These figures represent substantial numbers of healthcare entities and this provides opportunities for healthcare entities to begin marketing and networking through SM now to get an advantage over unconnected competition. A more recent data also found that among the top 50 pharmaceutical companies worldwide, nearly half actively participate in SM on Facebook, Twitter or YouTube [7]. A report by National Research Corp. also highlights the public are using social networking sites for looking on healthy living ideas, such as diet and exercise, to find health events, and to view health education videos from hospitals, medical practices and other healthcare providers [6]. Users are preferred to use SM as it provides two-way communications channel for healthcare marketing. Individuals can connect with others interested in the same medical topic, illness or injury, and in some instances give and get feedback from health facilities. It is also found Wikipedia as the single leading source of medical information for patients and healthcare professionals. The top 100 English Wikipedia pages for healthcare topics were accessed, on average, 1.9 million times in 2013. Rarer diseases, which often have fewer available information sources and are less understood by patients and clinicians, show a higher frequency of visits than many more common diseases [7]. Another great advantage of SM makes it greatly adapted by many healthcare organizations is the ability to share pictures, audio and videos. In a study by Infinigraph [8], it measured the effectiveness of different posts made by healthcare companies, including hospitals, clinics, and health care foundations. It is found that healthcare audiences engaged most with posts containing images or photos. Fig. I illustrate the proportion of pictures, audio, videos and links preferred by users [8]. In general, there are six types of SM and there can be overlap among the various services. Basically the six are; social networks, bookmarking sites, social news, media sharing, microblogging, blog comments and forums. Table I listed some examples of SM and how it can be used in leveraging the healthcare functions to reach their potential consumers.

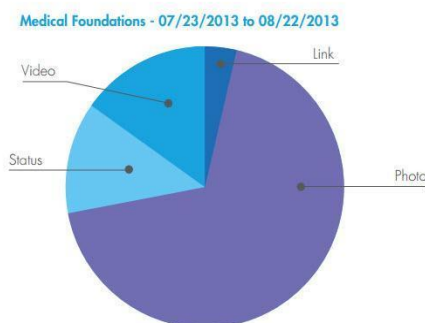


Fig. I. SM preferred contents-posts by the users

Table I. Examples of SM and the healthcare functions

SMS	Healthcare Functions
Facebook – is a social networking site that allows users (both individuals and organizations) to create profiles, share information and stay connected.	Provided a free and engaged audience for the few healthcare organizations involved to impact conversations to their advantage and attract a broader spectrum of stakeholders.
Twitter - a microblog site originally created for users to allow users to follow each other and share posts relating to news, announcements, and personal or organizational information.	Twitter has connected some healthcare organizations to each other, their patients, and the community by enabling them to follow news and draw attention to events and recognitions.
Blogs - provide a forum for cataloging the daily or weekly activities and issues of the organization and give readers an opportunity to respond or comment. Blog authors discuss a variety of issues of their choosing.	Helps to increase the visibility online. A blog is the best way to provide the fresh content required by today’s search engines and valued by consumers. By blogging regularly, businesses stay relevant, and people can find and engage with easier online.
LinkedIn - A social networking site designed specifically for the business community. The goal of the site is to allow registered members to establish and document networks of people they know and trust professionally.	With over 1.5 million healthcare professionals registered with LinkedIn, it can be a valuable tool for healthcare professionals when searching for a job, to identify hiring managers at your desired potential employer, or learn more about a company and its employees.
Doximity - An online social networking service for U.S. physicians. Launched in March 2011, Doximity has over 295,000 verified physician members as of January 2014 [10].	Doximity offers a searchable directory of 700,000 U.S. physicians as well as HIPAA-secure case collaboration and physician-to-physician messaging. A social network dedicated to US doctors for sharing of medical photos and Xrays. It uses apps on mobile devices for users to easily share medical images with other users.
DOBBS - Doctors Only Bulletin Board System. A dedicated site for networking and discussion for Malaysian doctors. It has been in existence since 2000 and now has over 2000 users on board. Besides forums, Dobbs users have access to a private Activity timeline for sharing pictures, videos and links, a private messaging system (with attachments), medical news, Continuing Medical Education (CME) activity and also a Job Board.	The site features: 1) Discussion forums in forum.mydobbs.net/forums/ 2) Facebook like Activity Wall (which is private and does not have the potential security problems that you have with Facebook) 3) Continuing Medical Development (CMD) section (including Malaysia Medical Association Continuing Professional Development (CPD) certified activity, MCQs, online streaming lectures) 4) Medical News and 5) an integrated Job Portal

III. STRATEGIC ADVANTAGES OF SM IN THE PRACTICE OF MEDICINE

SM offers healthcare organizations, practitioners and health consumers' abundance of potential benefits particularly for healthcare organizations such as sharing news and updates, promoting patients' access towards their healthcare services need, allows for interactive communication, as a great customer service tool, for recruitments and retention pool and, cost reduction. As for health practitioners, SM offers establishing national and international professional networks, quality of care and outcomes, CME and lifelong learning, also for research and publications purpose. Health users will benefit from SM in term of trustworthy, ease of use of the technology and able to communicate effectively during the times of crisis. While the SM itself accentuate its capacity as an intelligent tool and capable in offering natural approach for healthcare experiences. The followings elaborate more on the potential strategically use of SM for different parties concern; the healthcare organizations, health practitioners and, the health consumers.

A. *Sharing News and Updates*

SM can help further patient outreach and can be used to dispense helpful medical advice and share an organization's latest news. Healthcare organizations can share information about their products, services, promotions, campaigns, current happenings and upcoming events to the public. Organization's involvement in corporate social responsibility activities is also posted and shared on SM pages, which helps to enhance the image of the organization. In another way this serves as a great marketing tool for promoting the organizations and its resources.

B. *Engaging Patients' Access towards Healthcare Services Needs*

Engagement and surveillance on SM enables physicians to understand what patients are concerned about and going through to improve their health. What are their obstacles to improve their health and what health issues that interest and concern them. Scanning SM also gives physicians a rough idea of the healthcare needs of the community. Certain health awareness trends and practices can also be discovered. When the public do discuss their illness states online as well, certain 'hot spot' during early phases of outbreaks, can be identified or suspected early. SM has the potential to empower patients to get more information, ask questions and receive answers to their health related concerns. This is in alignment with patient-centric care [9]. Statistics by healthcareitnews.com reporting one-third of consumers now use SM sites and online forums for health-related matters, including seeking medical information, tracking and sharing symptoms, and broadcasting how they feel about doctors, drugs, treatments, medical devices and health plans [10]. Also, almost over half of the senior population online was ready to use the internet to

manage their healthcare and communicate with their physicians [10].

C. *Allows for Interactive Communication*

SM lets healthcare organizations transition from talking 'at' their audience to talking 'with' them, from one-directional telling to multidirectional interacting. Healthcare organizations can receive frequent updates of their followers' locations and frequency of use. Demographic information is critical in allowing an organization to see their most engaged audience, expand to new markets, and cater to the needs of each specific audience segment. This information, along with the feedback that SM participants provide, allows an organization to identify, analyze, and employ strategies for each demographic profile.

D. *As Customer Service Tool*

When certain inaccurate perceptions or comments are made on SM, there is the potential to correct these immediately, within a short time span. Addressing complaints on SM is also faster and may allow a dialogue to go on to correct misperceptions or misunderstanding. The online discussion allows others to see the expected course of action and proactive move institutions or clinics are taking. The public will also understand how seriously these institutions manage their customer service issues. Other uses include targeted communications with patients, response to queries and also clarifications. Institutions are now utilizing SM to interact with their patients and clients on a wide variety of issues [11] [12].

E. *Recruitments and Retention Pool*

Employing SM as a recruitment and retention tool by targeting millennials can provide healthcare organizations with a competitive edge in today's hectic marketplace. The current and forecasted US nursing shortage is a foremost issue for many healthcare organizations. Millennials represent a large pool of potential nurses, and organizations can alleviate their nurse shortages by reaching that pool through effective recruitment. SM use makes recruiting newly graduated nurses more effective. Likewise, to retain their current millennial nurses, administrative staff must facilitate communication. For example, integrating SM with the organization's nursing excellence recognition policy would fulfill millennials' desire for positive reinforcement, and it would also facilitate retention. Moreover, a greater number of hospitals are moving toward an employment model with their medical staff, and younger physicians are an important component of this emerging model. SM can aid in recruiting and employing young physicians while bridging the technology gap for baby boomer administrators [13]. Another reason to use SM in recruitment is the declining use of job boards. Millennials find job boards confusing and frustrating and are not comfortable using them. These candidates are instead turning to SM sites, such as LinkedIn and Twitter, to see job openings and learn more about organizations. To younger job seekers, SM is

familiar, easily navigable, and useful in stressful and complex situations such as job searching. On average across all fields, social networking follows only employee referrals in successful and cost-effective sources for recruitment [14].

F. Cost Reduction

SM provides an economical and effective means for the healthcare industry to reach out to consumers. It has strong impact in terms of cost reduction for marketing and customer service activities. Additionally, the cost of a SM recruitment strategy is budget neutral. In the dismal economy of lowering reimbursement rates and the uncertain implications of healthcare reform, every organization needs to reduce costs. With most SM options are free to users such as Facebook, Twitter, LinkedIn, blog hosting sites, and YouTube, the costs associated are mainly those of labor in the marketing and human resources departments.

G. Establishing National and International Professional Networks

For physicians, SM provides a channel to share experiences in closed peer-to-peer networks and even interested patient groups to have on-going conversations and discussions discussing the latest research and findings, trials and even best practices. These platforms can be used to share best practices, information, publicize events, seminars and conferences. The online social network is able to multiply these peer networks many times over and even across borders internationally. The expanded network can also highlight differences in practice across institutions or geography. However it is important to do this in an appropriate and ethical way and not to breach the confidentiality issues and over the boundary level [9].

H. Quality of Care and Outcomes

With SM, institutions can now compare how they are doing and what services they provide, with other institutions. This can be at the national, regional or international levels. Certain standards which are publicized can also be looked at and when institutions are planning certain facilities or strategies they can learn from the experience of others who have already embarked on these. Responses to quality related issues raised online allow a more rapid response. Time for institutions to respond to complaints and queries can be a good assessor of service quality standards [11] [12]. A recent data from healthcareitnews.com reported approximately 60 per cent of doctors say SM improves the quality of care delivered to patients [10].

With the advent of technology, moving out of the traditional practices can be facilitated by use of SM. For example blood sugar monitoring for diabetic patients, electrocardiogram monitoring for patients with ischemic heart diseases, peak flow monitoring in asthmatic and chronic obstructive lung disease patients can now be monitored by physicians and staff online or electronically. This can save patients having to make multiple trips to the

clinics or hospitals. This practice can potentially improve compliance as well as it is easier and more convenient for patients. They also avoid long waits with this strategy. Patients can also be reminded of their appointments online and through SM instead of having letters send traditionally or having to employ specific staff to make reminder phone calls [15] [16] [12].

I. Continuing Medical Education (CME) and Lifelong Learning

New evidence-based findings, bench to bedside research and innovations are all increasing at a rapid rate. For a physician to keep abreast it is almost inevitable as they will realize the limitations of just using traditional techniques of information and knowledge acquisition. Physicians and healthcare personnel will have to adapt to a new model of learning and sharing information. Many institutions these days are using SM to conduct CME. It has proven to be easily accessible, popular and time-saving for the busy physician and is catching on. In this sense as well, SM can help them to improve their quality and standards of patient care [17] [18].

J. Research and Publications

Communication barriers and outdated technology can hinder applying evidence-based research findings in a timely manner. SM facilitates sharing of information and findings in this aspect. For example, a report stated that 'the Facebook fan page accounted for the largest number of referrals and consults to the Science of Soccer Online (SSO) website and those assessing the page spend an average of five minutes and read two articles per visit'. New findings and evidence which are practical are easily shared and read. This outreach to practitioners is easy, rapid and hassle free [19] [20].

K. Trustworthy

SM is changing the way physicians and patients interact. Patients are now beginning to play a more active role in their treatment. SM is one of the drivers towards a more patient-centric model of healthcare. It offers a platform for health communications, empowerment and even possibly strengthening the physician-patient relationship. One of the reasons SM is an effective means of outreach for healthcare entities is that consumers trust the authority of those entities and the information they provide. In a recent survey, 90 per cent of respondents from 18 to 24 years of age said they would trust medical information shared by others on their SM networks, and 60 per cent SM users said they would trust SM posts and activities by doctors over any other group [21].

L. Ease of Use

Communications can take place easily, anywhere via a variety of devices these days. There are many ways healthcare entities are reaching out. Mobile web access via smartphones has overtaken conventional desktop internet

use. Smartphones can be used to access emails and social networking sites on the go. In coffee shops and subway stations people are often in virtually synchronous conversations via instant messaging. No spoken words are used strictly and shorthand expressions, pictograms and emoticons are utilized to express feelings via these electronic communications modes [9]. Outreach through video content is also showcasing particular growth. YouTube traffic to hospital sites has increased 119 per cent year over year. Consumers like to hear directly from healthcare professionals. By posting video to YouTube or another video-hosting site and promoting those videos through SM posts, consumers can be effectively reached [21].

M. Communicate in Times of Crisis

When disaster strikes, whether it be a flood, an earthquake or a terrorist attack, hospitals and the healthcare providers are at the center of it all. Healthcare providers can leverage SM networks to provide real-time updates both for those directly affected by the crisis and those watching from afar. Social networking sites; Facebook and Twitter are among the most popular medium to give updates and breaking news of what is happening and disseminate help messages that are needed during the crisis events. Those announcements can be easily posted and shown on the walls, read and shares by many others.

N. As an Intelligent Tool

Google People Finder is yet another example of the power of the internet and SM to connect people after disasters [9]. The website started by Google engineers is now very much a part of the Google Crises Response Division of Google.org. People can access the site via mobile devices or traditional internet. The International Network of Crisis Mappers is also another example where experts, practitioners, researchers and volunteers engage in discussions on humanitarian crises, crisis technology and crisis mapping [9]. These people leverage on mobile and web-based technology to assist communities prone to disasters in a variety of ways.

O. Offering Natural Approach for Healthcare

While for individual health users, SM is something that can benefit them by offering a natural and fearless health services expectations. Health is something that is considered personal in which each of us is individually invested. Patients often scared of their health statuses, unprepared for hospital experiences, and lost in the confusion of healthcare. Traditional marketing is seen as no longer fit the anticipated healthcare experiences. Before SM became popular, hospitals approached communicating and marketing traditionally; through broadcast, one-way messages. And the patients and community were forced to accept the messages being fed to them. Now SM has opened a new perspective towards self-preparedness leaving the fear of

uncertainty and ambiguous feeling of where patients can share fears about diagnoses with distant friends and families. They can connect with people across the world who struggle with similar health conditions, finding support and companionship. They can question whether the doctor gave the right diagnosis or express displeasure with a recent emergency room visit. Greatly, SM is something that would offer such natural approach for patients [22]. A fact from a survey found nearly forty one per cent respondents said SM would affect their choice of a specific doctor, hospital or medical facility [10].

IV. CASE STUDIES OF SM WITHIN HEALTHCARE ACTIVITIES

A. Facebook and Twitter

Several healthcare organizations around the world have already implemented their SM strategies. As part of healthcare marketing efforts, organizations can use SM channels including blogs, forums and microblogs, to share success stories from out of the ordinary operations or treatments, medical research or other significant achievements. This section looks at how SM can work for hospitals and others in the healthcare industry. The first case was the Dublin Methodist Hospital in Columbus which had piloted a SM program for its larger system, Ohio Health, to better connect with its community. Its marketing specialist launched targeted Facebook and Twitter pages that include links to physician profiles, virtual tours of the hospital, and patient guides with a personal feel. The hospital frequently posts updates about hospital events, awards, and the latest news on health inside and outside of the hospital system. These SM efforts have gotten a significant positive response from patients. These and other hospitals exemplify the many possibilities for successful outreach that a SM campaign offers a healthcare organization [13]. Another case of SM strategic approach was inspired by Levy's success. Marty Bonick, president and CEO of Jewish Hospital in Louisville, began the hospital's SM campaign with a blog of his own, Hospital Life. His blog sparked Twitter and Facebook accounts for the hospital, which have been very successful in connecting with patients and employees. Bonick cites bridging the technology divide within his workforce as "a way to break down the walls and that administrative 'us versus them' mentality" [23]. Another case was reported on February 2009, where the Henry Ford Hospital became one of the first hospitals to Tweet a live procedure from an operating room. Doctors, medical students and curious non-medical personnel followed along as surgeons tweeted short updates on the kidney surgery to remove a cancerous tumor. This healthcare marketing tactic can effectively create excitement and raise public awareness for a healthcare organization. In the case of the Henry Ford procedure, Twitter was abuzz that February day with users both re-tweet the messages from Henry Ford and adding their own thoughts on the event. That buzz can help healthcare organizations both attract new patients and

recruit medical personnel [24]. It is also makes sense for healthcare marketers to leverage SM channels in order to achieve coverage by both mainstream media and industry publications. For example, when Aurora Health Care tweeted a knee operation in April, it received significant media attention, both from mainstream media and industry publications including Good Morning America, the local Milwaukee public radio network and Hospital Management Magazine. Twitter also reported as taken the technological lead in combatting the deadly epidemic of Ebola. Companies were using SM channels to track Ebola outbreaks in western Africa by using data mining and crowdsourcing of SM channels to paint a clearer picture of the Ebola epidemic in Africa and further targeting mobile platforms and devices as a means of arming frontline workers with information they need. Facebook, Twitter, Yelp and other SM platforms pinpoint all comments and conversations taking place about a specific health concern. And through the application called HealthMap, it then generates a map of that communication frequency and separates the data generated by those SM channels into structured data that can be used by among others, the public health agencies. The platform has been used to chart the course of Ebola in Africa, pinpoint food poisoning sources, and identify influenza outbreaks through the "Flu Near You" app. [25]. The relevancy of SM to help in tracking the early outbreak of the epidemics is possibly due the nature that people are pretty open to discussing anything on Facebook, Twitter, Yelp or other SM channels and this is either because people are looking for a sympathetic ear or they just want to get something off their chest [26]. Most of the time, a person is far more likely to announce on Twitter that they have diarrhea than to mention it to family or friends. Practically, SM and text messaging health campaigns are work because everybody has a smartphone and knows what Facebook and Twitter is [26]. Meanwhile, some healthcare organizations are beginning to recognize the potential impact of leveraging SM channels to complement training efforts. Mayo Clinic SM Manager, Lee Aase for example, incorporated SM into a recent training presentation for local chapters of the American Heart Association. During the presentation, Aase leveraged Twitter to encourage participants to contribute to the discussion using the #AHAchat hashtag [27]. According to Aase, weaving SM into healthcare training initiatives can provide multiple benefits includes; giving trainees a forum to ask questions and quickly receive answers, providing presenters with immediate feedback from trainees (if the trainees have mastered a concept of it and more guidance is needed, enabling organizations to complement healthcare marketing efforts by just sharing slideshows, video or pictures from training sessions on social sites like YouTube or Flickr [28]. Another case of strategic use of SM is, in times of crisis such what happened during the November Fort Hood shooting attack [29]. Steven Widman of Scott & White Healthcare, one of the hospitals that treated Fort Hood victims, used Twitter to

provide up-to-the-minute news. Through Twitter, Widman provided updates on emergency room access and hospital operation status, re-tweeted news from Red Cross and communicated with reporters. Widman shared the results of the SM crisis communication efforts where; Twitter followers increased 78 per cent in just three days, Scott & White Healthcare was listed on the front page of Twitter as a "trending topic" as the hospital's YouTube channel was ranked the 79th most viewed non-profit channel during the entire week surrounding the crisis [29].

Another case was recently, the Facebook executives have come to realize that healthcare might work as a tool to increase engagement with the site. Facebook is plotting its first steps into the fertile field of healthcare where the company is exploring creating online 'support communities' that would connect Facebook users suffering from various ailments. A small team is also considering new 'preventative care' applications that would help people improve their lifestyles. The catalyst of the steps is resulted from the unexpected success of Facebook's organ-donor status initiative, introduced in 2012. The day that Facebook altered profile pages to allow members to specify their organ donor-status, 13,054 people registered to be organ donors online in the United States, a 21 fold increase over the daily average of 616 registrations, according to a June 2013 study published in the American Journal of Transplantation [30]. Separately, the Facebook product teams also noticed that people with chronic ailments such as diabetes would search the social networking site for advice. By integrating SM into the healthcare marketing mix, organizations can share accurate, timely information regarding symptoms, diseases, medications, treatments and more. Besides, social sites also provide a forum for patients to share their health problems and questions about treatments with other patients, as well as qualified medical personnel for example the 'Inspire' social site, for instance, partners with trusted health nonprofit organizations to ensure information is accurate and its community is safe.

V. SM WITHIN MALAYSIAN HEALTHCARE

SM healthcare strategic approach is the around the globe and for Malaysian businesses they are using SM to change traditional customer relationship (CRM) management methods. According to the business IT solutions provider, the Oracle Corp Malaysia Sdn Bhd was highlighting that businesses are using social space to engage customers with two-way interactions and the healthcare, retail, travel and hospitality are the key sectors looking to benefit from SM strategy [4]. Social networking statistics show that Facebook penetration in Malaysia is 47.9 per cent of the country's population and 84.71 per cent in relation to number of internet users [31]. There are numbers of cases of where the healthcare organizations in Malaysia are using SM to facilitate their healthcare operational activities be it for marketing purposes, health and wellness promotions also to update recent news

and events regarding healthcare activities for societal benefits.

An example would be on last Dec 1, 2014 in conjunction with the World AIDS Day, the Malaysian AIDS Foundation together with The Body Shop and ESP Condoms had launched a SM-driven campaign that seeks to raise awareness of and evoke social change in response to the alarming rise in sexually transmitted HIV infections in the country. The campaign was initiated due to the cold facts that over 74 per cent of new HIV infections in Malaysia in 2013 were sexually transmitted, which was a drastic two-fold increase in five years of where both women and men are equally at risk. Considering how sex in all its complexity remains largely a taboo in the culture, the parties associated in the campaign has taken an immediate first step to talk about it, and what better way to do that than by using SM platforms. Harnessing the full potential of SM, they hope to reach out to as many users, particularly young people, with accurate information about HIV and safe sex. #PutItOn is a year-long campaign beginning World AIDS Day 2014, with specially packaged boxes supplied by ESP Condoms across all The Body Shop outlets in the country [32].

Another example is the Malaysia 'MyHealth Portal' (MHP), a web-based health information service set up by the Ministry of Health Malaysia as a national initiative by the Malaysian government to bring life-long wellness wherein individuals, families and communities are empowered to play a major role in managing their health. The objectives of this portal such to empower and encourage individuals to be responsible for their health by providing health information and education online as well as to provide reliable and quality health related information to specific target groups in a user friendly and easily accessible manner. Through MHP the public are able to access current health information and health advice easily via the internet. Among health-related topics that this portal carries such as; *Health for Kids, Teenagers, Prime Years, Golden Years, Nutrition, Oral Health Alert* and also maintains a Health Forum to discuss particular health issues. Besides that this national official portal of health information also updates on recent news of any outbreaks' announcements and any health concern-issues by responsible health agencies along with updates on health events that occurred around the country such like the blood donations' and free vaccinations' campaigns. In order to cope with the rapid changing of today health users' preference, the portal also offers its contents in a user friendly SM medium to allow more users especially the young generations which will constitute the generation in year 2020 to join the web-based health services. The dissemination of MHP's information is made through Facebook, Twitter and Youtube. Besides that, the mobile MHP also was produced for users of mobile devices to allow for easy access to SM; the Facebook and Twitter. Users can follow the activities carried out by MHP with just surfing the MHP Facebook and can become one of MHP Facebook friends [33]. The Facebook account recently

recorded 41,287 likes and the numbers are expected to increase.

Also, there are numbers of healthcare organization in Malaysia utilize the use of SM to market and promote their business activities in SM; Facebook, Twitter and Youtube. Among the examples such as the BP Healthcare Group (a healthcarelaboratory-basedservice), Thinkplus Healthcare (a Malaysian management consulting), Dolphin Healthcare Sdn. Bhd. (a Research & Development, Manufacture and Marketing of healthcare products), Dental Pro (Dental Specialist Centre) and more. The use of SM in the companies is to assist with marketing strategy and development of company's SM channels. Besides that the organizations also use the SM to plan and manage their online sales, for marketing, promoting and advertising as well to develop and manage digital marketing and ecommerce campaigns while ensuring alignment with the company objectives.

VI. ISSUES AND CHALLENGES OF SM USE WITHIN THE HEALTHCARE INDUSTRY

There are some of unique concerns for healthcare marketers when it comes to marketing on SM. Among the highest concerns include; fear that SM may compromise patient or client privacy and security, challenges in creating a secure monitoring system which could potentially lead to charges of malpractice, challenges in producing factually accurate content and, high operational cost.

A. *SM May Compromise Patient or Client Privacy and Security*

Patient confidentiality has always been a core concept in medical practice. It refers to a health personnel's responsibility in keeping patients' information secret. Protection of data is not only an ethical but also a legal duty of the health professional and has to be balanced against societal needs [34]. Today, one of the major concerns regarding patients' confidentiality is due to ever-expanding use of SM. Popular social networks like Facebook, LinkedIn, MySpace, Twitter or media sharing sites YouTube (videos) and Flickr (photos) are very popular and allow anyone to transfer materials to their contacts. Smartphones and availability of 3G or 4G technology make it very easy to achieve this anytime anywhere. It is common to share information about patients between physicians or other health care personnel during delivery of healthcare. Utilization of any media including SM for data exchanges without the patient's knowledge requires careful ethical consideration. Material published on the internet often exists in the public domain permanently and one may not have control over the ultimate distribution of these materials online. As such, it is important that health professionals exercise caution when discussing any details relating to specific medical cases. Informal discussion about patients on public internet forums should be avoided. Posting comments under a username does not guarantee anonymity as any comments made online can be traced back to the original author. It is not recommended to

upload photographs of patients or images depicting the body parts of patients or surgical procedures without written informed consent from the patient. It should be noted that these images might be downloaded and forwarded by others.

Also, the availability of medical data due to electronic medical records combined with the increased use of social networking poses challenges to the healthcare community. In 2009, ABC News reported that 13 per cent of medical students are sharing sensitive health information regarding patients on blogs or social networking websites. Reports of nurses and physicians posting x-rays and pictures on Facebook pages are an alarming trend. A more recent study by the Journal of Medical Internet Research found that 24.1 per cent of physicians used SM daily to scan or internet search engines for medical information [35]. Another case was the Canadian Broadcasting Corporation (CBC) which conducted an investigative research after learning of a woman in Canada who lost her medical benefits due to research conducted using Facebook. The insurance company found that the woman posted pictures of herself at a bar show, birthday party, and on a sun holiday. When the CBC contacted the insurance provider, they said they would never cancel benefits based on just a few Facebook pictures, but they did confirm that they use Facebook as a source of investigating insurance fraud [35].

B. Challenges in Creating a Secure Monitoring System

The buzzword on the internet these days is the SM, and this underlines the fact that we live interconnected lives and we are very much social creatures. We like to share things and have that built-in curiosity to see what our friends, family and colleagues are up to as well. It makes our lives more interesting that the internet via social networks has made the ability to connect with one another just that much easier. The General Medical Council (GMC) has warned the doctors about maintaining a professional boundary between themselves and patients through SM. Using SM also creates risks, particularly where social and professional boundaries become unclear. Practitioners must follow the guidance in '*Maintaining a professional boundary between you and your patient*' [36]. If a patient contacts a doctor about their care or other professional matters through his private profile (Facebook, Twitter, personal blog, etc.) the doctor should indicate that he cannot mix social and professional relationships and, where appropriate, direct them to the doctor's professional profile. In the context of the physician-patient relationship, the GMC warns the practitioners that they must consider the potential risks involved in using SM and the impact that inappropriate use could have on patients' trust in them and society's trust in the medical profession. SM can blur the boundaries between a doctor's personal and professional lives and may change the nature of the relationship between a doctor and a patient. The must follow the guidance on the use of SM. The American Medical Association (AMA) also addresses considerations for physicians when utilizing electronic systems including

SM. These concepts are applicable to all healthcare providers in considering the ethical challenges of SM [37].

C. Challenges in Producing Factually Accurate Content

People most of the time assumes that the information in their network comes from trusted reliable sources. But human nature tells us something else where people love to gossip and embellish. A 2009 report in the Journal of the American Medical Association provided significant insights into the behaviors of medical students' use of social networking sites and blogs. Of the 78 U.S. medical schools surveyed in the report, 60 per cent of them "reported incidents of students posting unprofessional online content" [38] and "13 per cent of the deans cited violations of patient confidentiality" [39]. People invariably trust the relationships in their network. They want the information they are passing to be interesting and sound smart. Human behavior takes over and people go too far. The opportunities for violating patient confidentiality have moved from the healthcare setting, where actions can be monitored and managed, to cyberspace, where the compromise can propagate at epidemic rates, and at least at this point, where there is little understanding of implication on the Health Insurance Portability and Accountability Act (HIPAA).

A case also was reported in Malaysia due to the spread of false information and news regarding the outbreak of Ebola in Malaysia which eventually found to be false news. The report was being circulated on SM such as Facebook, that an Ebola case has been detected in the country. Therefore the Malaysia Health Director-General Datuk Dr Noor Hisham Abdullah censured the parties who spread such rumors as irresponsible, saying there had been no quarantine cases related to the disease. He was reported to give feedback that the risk of Ebola into Malaysia is very low and strictly warned the SM users through his Tweeter for not spreading fake news [40]. Ebola is a hemorrhagic fever, often fatal to humans, and other primates and it has caused more than 1,000 deaths in Sierra Leone, Liberia and Guinea in West Africa since March 2014. However there are no real cases of Ebola outbreak to be detected in Malaysia despite the spreading news that a 26-year-old man from Kapit, Sarawak who had just returned from Africa was being isolated at Sibu Hospital as a precautionary measure against Ebola but just not long after that he seemed to be on mend and his fever had gone down. The spread of this false news had triggered panic among the society and SM had just quicken the fear alarm among them.

D. Increase Operational Cost

It is undeniable that SM would offers great advancement to the healthcare services revolutions particularly in in promoting wellness and healthy lifestyles however there are several weaknesses regarding the strategic implementation of SM. One of the weaknesses is due to high operational cost to setup and maintain the SM and here obviously it had brought to reverse the advantages that it supposes to bring. In a report by Malay Mail in October 2013, the Health Ministry of

Malaysia had improperly spent RM320,000 to develop Facebook and Twitter pages as part of its health education efforts, according to the Auditor-General's Report released that year. The amount was part of a RM47 million allocation for the ministry's health education division to conduct informational campaigns such as the Healthy Living and "Tak Nak" anti-smoking movements as well as to organize the celebration of various health-themed days. In its criticism of the division's programmes, the National Audit Department said that the efforts to use SM as a means to educate the public must be "more dynamic, relevant, and up to date" in order to achieve its objectives. Other weaknesses it detected with the division's execution of its programmes include a failure to draw up formal contracts for the supply of its promotional material, delays in formalizing agreements, non-verification of performance bonds, and uncoordinated execution of its billboard advertising campaign [41].

VII. SM GUIDELINES

The World Medical Association (WMA) has adopted A set of guideline titled 'WMA Statement on the Professional and Ethical use of Social Media' at the 62nd WMA General Assembly, Montevideo, Uruguay, October 2011 [42]. It highlights not only the ethical and confidentiality issues but also emphasizes the importance of including educational programs and appropriate guidelines in medical curricula and continuing medical education.

It is advisable for healthcare organizations to have well-structured modules on medical ethics and strict guidelines on the use of SM within clinical practice. These guidelines must also be accompanied by a well-publicized standard operating procedure for any breaches of confidentiality thereby highlighting the seriousness with which the institution views this matter.

Perhaps the following framework (Table II.) suggesting the best practices for SM healthcare marketers can relief the industry in getting some ideas of how they should go about their SM healthcare practices and policy [8].

Table II. Framework for SM healthcare marketers' best practices.

Practices	Descriptions
Make your data available	Allow your ratings and reviews, as well as error rates within your database (If applicable) to be made public.
Educate your employees on SM policies	Make the risk of violating the Health Insurance Portability and Accountability Act (HIPAA) clear, and prohibit posting inappropriate information about doctors or patients.
Implement privacy settings	Be sure to safeguard personal information and content.
Avoid using SM channels to communicate with patients on sensitive issues	Advise them on a secure, personalized server.

Enlist at least one author, editor, or reviewer on every piece of content that you publish	Include references or links to the source of your content, and date it whenever possible.
Include an "About Us" or "History" section on your website	Present information about qualified staff, services, and facility as well as your purpose, goal, or mission.
Ask for audience feedback through surveys and questionnaires	Make your contact information easy to find, and encourage your audience to get in touch via email, Facebook, and Twitter. When they do reach out, respond promptly and thoughtfully.
Any healthcare/medical oriented blogs or individual practitioners should contain the disclaimer.	Disclaimer: "The posts on this site are my/our own and do not necessarily represent the positions, strategies, or opinions of the healthcare institutions/organizations".

Meanwhile Table III. highlights some preclusion steps following the use of SM with regard to online social networking sites in discussing healthcare information.

Table III. Preclusion steps following the use of SM in discussing health issue with the healthcare organizations/physicians.

Types	Security control
Facebook	What is being posted on some of these pages could be construed as advertising in breach of medical council guidelines so make sure the Facebook's content is ethical and any "advertising" has the appropriate official approval. Be cautious on any discussions and sharing patient pictures in particular which may expose doctors to the risk of legal action. It is strongly recommended to think twice before posting anything.
Twitter	Using Twitter is also a popular activity and useful for getting news and sharing links out on this micro-blogging site. Others like it for expressing their opinions and thoughts. Like Facebook it is fine but be careful what you Tweet is instantly noticeable and not easily retractable. You should be mindful of the same General Medical Council (GMC) guidelines in using this SM platform.
Blogs	For health users, they need to be cautious when providing personal information for "surveys," health screenings, or "sweepstakes" or on a health web sites. Be sure to check their privacy policy, ask how the information will be used and who will have access to it.
Linkedin	There seems to be less sharing of personal things on Linkedin than Facebook but nevertheless one should be cautious about what you share on your Linkedin profile. Keep it professional and you should be fine on Linkedin.
DOBBS	Users do not have to worry about accidentally sharing things to the public as the members of DOBBS are those who are registered local health practitioners and DOBBS is not open to public to join unlike the Facebook. If you are a Malaysian doctor, do come aboard DOBBS and worry no more on accidentally posting.
Doximity	Similar to DOBBS, this confidential forum allows verified U.S physicians to discuss research and talk

about medical cases, which the law permits as long as the conversation is confined to health professionals. A secure doctor-only network ensures professional and personal realms are kept apart, allowing doctors peace of mind in the online world without worrying on having insecure/publicly discussions.
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In general, if users are engaging in the above said activities, they need to be extra cautious and when it comes to posting patient information or pictures as they never know for sure (nearly 10 per cent of SM accounts are fake) who is really who in that SM groups or who has access to what you posted.

VIII. ETHICAL POINT OF VIEWS TOWARDS SM AS STRATEGIC BUSINESS ADVANTAGE FOR HEALTHCARE ORGANIZATIONS

This section examines Kantianism, Act Utilitarian, Rule Utilitarian and Social Contract Theory (SCT) approaches to business ethics, respectively using the SM as a strategic advantage within the healthcare organizational business and to decide whether the act is ethically accepted by the ethical theories.

A. Kantianism Theory and SM within Healthcare Activities

Kantianism is the name given to the ethical theory of a German Philosopher Immanuel Kant. Kant believed that people's actions ought to be guided by moral laws, and that these moral laws were universal. Kant held that in order to apply to all rational beings, any supreme principle of morality must itself be based on reason and the only thing in the world that can be called good is a good will which often accomplishes good deeds. A good will is good in and of itself and since a good will is the only thing that is universally good, the proper function of reason is to cultivate a will that is good in itself [43]. According to Kant further, what we want to do is of no importance where our focus should be on what we ought to do (dutifulness). A dutiful person feels compelled to act in a certain way out of respect for some moral rule. Our will then should be grounded in a conception of moral values. The moral value of an action depends upon the underlying moral value. It is critical therefore, that we be able to determine if our actions are grounded in an appropriate moral value. What makes a moral rule appropriate is based on two categorical imperatives; the first formulation and second formulation [43]. The first formulation of categorical imperative by Kant highlights 'act only from moral rules that you can at the same time will to be universal moral laws'. The transition of this moral rule could be: "A person may make a false promise when that is the only way to escape a difficult situation". To evaluate this moral rule, we universalize it – what would happen if everybody in extreme circumstances made false promises? If that were the case, nobody would believe promises and the moral rule self-destructs when we try to make it a universal law. Therefore, it is wrong or a person in distress to make a promise with the intention of breaking it [43]. The second formulation of categorical imperative by

Kant highlights 'act so that you always treat both yourself and other people as ends in themselves and never only as a means to an end'. The second formulation states that it is wrong for one person to use himself or another person as a means to an end instead, every interaction with other people must respect them as rational beings [43]. As highlighted in the earlier part of this article, SM are offering abundant of benefits to many parties related to healthcare organizations including the institutions itself, health practitioners and also the health users. The benefits seem to outweigh the risks that it has had to expect. It is also practically acknowledged that healthcare discipline is such a severe discipline and governs by numbers of strict laws. Those involved in the healthcare practice must adhere and abide with all the pertinent statutory laws affecting the practice. As for the healthcare professionals and the practitioners they have to declare their commitment to assume the responsibilities and obligations of the medical profession in order to practice. As mentioned earlier, among the highest concerns of SM in healthcare activities include; fear that SM may compromise patient or client privacy and security, challenges in creating a secure monitoring system which could potentially lead to charges of malpractice and, challenges in producing factually accurate content. Regardless of healthcare transactions either it is online or physical one, the activities is governed under the provision of HIPAA Security and HIPAA Privacy Rules Acts. These acts work together and govern how the healthcare organizations handle patient information. HIPAA Privacy Rules cover how health institutions and practitioners can use and disclose patient information while the HIPAA Security Rules provide standards for safeguarding and protecting electronic patient information. The HIPAA Security Rule implement standards to safeguard and protect electronic protected health care information (ePHI) while permitting the appropriate access and use of that information, which ultimately promotes the use of ePHI in the industry, an important goal of HIPAA. The Security Rule requires us to maintain reasonable and appropriate administrative, technical, and physical safeguards for protecting ePHI. It is mutually understood here that, since all parties within the healthcare operations would not exploit the health user's data for their benefit as that action is against their obligations as medical professionals and practitioners, there will not be a risk of speculating SM as invasion to the first formulation of categorical imperative by Kant. This is further understood that, there are no intentions of those involved in the healthcare operations using SM to make a promise with the intention of breaking it as it is against their rule of conduct and oath. Similar rule applies whether either it online or physical healthcare approach as they are governed by similar codes of conduct. Relating to the second formulation of categorical imperative, since the principle hold by the healthcare professions is fair treatment to all therefore, there will be is no issue of treating people as a means to an end. Instead, every interaction within the healthcare activities require the professionals to respect their patients as rational

beings whether it online or face-to-face-interactions. To conclude this based on both Kant's formulation of categorical imperative theoretical approach, it can be claimed that the use of SM in healthcare activities is somewhat accepted from the Kantianism theoretical point of view.

B. Act Utilitarianism, Rule Utilitarianism and SM within Healthcare Activities

Utilitarianism is based on the Principle of Utility, which states that an action is good or bad to the extent that it increases or decreases the total happiness of the affected parties [43]. According to the philosophers Jeremy Bentham (1748-1832) and John Stuart Mill (1806-1873), an action is good if it benefits someone and an action is bad if it harms someone. This theory is also called the 'greatest happiness principle' and it is in sharp contrast to Kantianism theory. This principle serves as a yardstick to judge all actions in the moral realm and to evaluate the morality of an action, we must determine for each affected person, the increase or decrease in that person's happiness and then all up all of these values to reach grand total. If the total is positive (the total increase in happiness is greater than the total decrease in happiness) - the action is moral and if it verse - the action considered immoral. Another thing that is important under this theory is the morality of an action has nothing to do with the attitude behind the action where it is all about the action itself [43]. There are two types of utilitarianism which are Act Utilitarianism and Rule Utilitarianism. Act Utilitarianism is an ethical theory that an action is good if its net effect is to produce more happiness than unhappiness. This is done by adding the change in happiness. If the net effects of all affected parties are more positive, then the action is deemed good and vice versa. The cases for Act Utilitarianism are; it focuses on happiness by relying upon the greatest happiness principle as the yardstick for measuring moral behavior, it is down-to-earth where the calculus provides a straightforward way to determine whether a particular action is good or bad by simply sum up the anticipated positive and negative consequences resulting from an action and, finally this ethical theory is comprehensive one where it allows the moral agent to take into account all the elements of a particular situation [43]. Differ from Act Utilitarianism, Rule Utilitarianism focuses on the moral rule. Its concept is "an action is morally right if and only if it is consistent with the set of rules or moral code that would maximize happiness, if generally followed." The moral rule, if followed by everyone, that leads to greatest increase in total happiness will be deemed good or moral [43]. Here, the difference is Rule Utilitarianism applies the Principle of Utility to moral rules, while Act Utilitarianism applies the Principle of Utility to individual moral actions. A report by National Research Corp had highlighted the public were using social networking sites for looking on healthy living ideas, such as diet and exercise, to find health events, and to view health education videos from hospitals, medical practices and other healthcare providers [6]. Users are preferred to use SM as it provides two-way communications channel for healthcare marketing whereby individuals can connect with others interested in the same medical topic, illness or injury,

and in some instances give and get feedback from health facilities. This evidence has given some ideas of how SM benefits the healthcare users in many creative ways and how this state-of-the-art technology has bridged the gap that has been long exists between healthcare professionals and health users in terms of communication barriers. Definitely SM is a technology that everyone has waited for with the hope that it can bring happiness to those who are looking for wellness promotion towards achieving greater and healthier lifestyles. It is also critical to think that the use of SM within the healthcare activities has been bounded by several rules of conducts. The practice of SM in health activities is somewhat governed by several moral rule principles such as SM guidelines for medical students [52] and SM guidelines for health professionals [36]. The World Medical Association also has adopted a set of guidelines titled 'WMA Statement on the Professional and Ethical use of Social Media' at the 62nd WMA General Assembly, Montevideo, Uruguay, October 2011 [42] which highlights not only the ethical and confidentiality issues but also emphasizes the importance of including educational programs and appropriate guidelines in medical curricula and CME. Therefore by considering the above justifications it can be concluded that both of the utilitarianism ethical theories; the Act Utilitarianism and Rule Utilitarianism are morally accept the use of SM as health organizational strategic advantage towards leveraging borderless health benefits to all community. It is considered a medium that benefits many people within the healthcare revolution which brings the happiness to those involved either in the organization, the practitioners and the health users without neglecting the vital moral values that conduct the acts.

C. The Social Contract Theory (SCT) and SM within Healthcare Activities

The Social Contract Theory (SCT) is derived from philosopher Thomas Hobbes (1603-1679). [43] Hobbes argues that without rules and a means of enforcing them, people would not bother to create anything of value, because nobody could be sure of keeping what they created. Hence according to Hobbes, moral rules are simply the rules that are necessary if we are to gain benefits of social living. He further argues that everybody living in a civilized society has implicitly agreed to two things; the establishment of such a set of moral rules to govern relations among citizens and, a government capable of enforcing these rules. James Rachels in [43] further expands the definition of SCT by which 'morality consists in the set of rules, governing how people are to treat one another, which rational people will agree to accept, for their mutual benefit, on the condition that others follow those rules as well'. The justifications made in the previous ethical theories have made relevant to the SCT approach whereby there are numbers of legislations and moral rules that govern the use of SM in healthcare activities both at the international and national levels. Some examples of such policies and legislations are; policies on physicians' use of SM from the American Medical Association (AMA), U.K General Medical Council (GMC) and, the Australian Health

Practitioners Regulation Agency (AHPRA); Malaysia Telemedicine Act 1997 and Malaysian Medical Association (MMA) Code of Ethics (2001). These legislations and rules also have been enacted and strictly implemented by the governments of each country. A medical council or body within the country is the parties that is mainly responsible against the unethical behavior or misconduct that occurred within the healthcare practice at their countries. Based on SCT, it is ethically accepted for SM to be used within the healthcare organizational activities as their strategic advantage due to the existence set of conducts to govern the behavior and an establishment of responsible parties to enforce the rules.

IX. POLICIES AND LAWS GOVERNING THE USE OF SM IN HEALTHCARE

The latter part of the 20th century has brought the birth of the internet, personal computer, and public-key encryption and today SM such as blogs, YouTube, and Facebook continue to create an online generation resulting where the information security professionals are waging a different kind of war, focused on the protection of sensitive personal, private health information from threats caused by hackers, malware, spyware, viruses and cookies. Therefore, concerns over SM users' theft of personal health information and intellectual property need to be addressed. This section highlights some of the international and national policies also the laws that rule the use of SM within the healthcare business activities. The following are among several policies and acts developed to address the rising issue: the U.S HIPAA Privacy Rule and Security Rule (2003); policies on physicians' use of SM from the American Medical Association (AMA), U.K General Medical Council (GMC) and, the Australian Health Practitioners Regulation Agency (AHPRA); Malaysia Medical Act 1971; Telemedicine Act 1997; Malaysia Personal Data Protection Act 2010; and Malaysian Medical Association (MMA) Code of Ethics (2001).

A. U.S HIPAA Privacy Rule and Security Rule (2003)

The U.S Privacy Act of 1974 established Fair Information Practices (FIPs) and the issue of privacy began to be shared on a national scale resulting in the development of data and privacy protection laws [35]. The Health Insurance Portability and Accountability Act of 1996 (HIPAA) was enacted by the U.S Congress in order to improve the delivery of healthcare services in the U.S. Congress recognized that the movement of electronic data exchange in the healthcare sector posed a possible threat to privacy and accordingly, mandated that the U.S [35]. Department of Health and Human Services (HHS) disseminates regulations to protect the privacy and security of electronically-transmitted health information. In December 2000, HHS created a set of rules to protect the privacy of personal health information known as the Privacy Rule. The Privacy Rule establishes national standards to protect individuals' medical records and other sensitive personal health information by requiring appropriate

safeguards, uses and disclosures, patient authorizations, and certain rights over their health information [35].

The HIPAA Security Rule was finalized in February 2003 along with the Privacy Rule [35]. The HIPAA Security Rule establishes national standards to protect individuals' sensitive electronic health information that is created, received, used, or maintained by a covered entity. The Security Rule requires appropriate administrative, physical and technical safeguards to ensure the confidentiality, integrity, and security of sensitive electronic health information [35]. It is important to note that the HIPAA Privacy and Security Rules are designed to establish the minimum standards. However the states are free to develop more rigorous requirements as long as these requirements do not conflict with HIPAA. Each covered entity under the act is, therefore, required to consider all state healthcare privacy and security laws, and to operate with these laws even if they exceed the HIPAA standards [35].

B. SM Policies – United States, United Kingdom and Australia

Another very important component to address risks associated with SM is through developing a set of SM policies. One policy should be focused on the human behavioural aspects of SM and another policy should be focused on how the organization plans to use SM. Such a policy should set the overall bounds of how SM shall be used by the organization including activities such as creating an organizational Facebook page and a campaign to increase wellness, or driving consumers to the organization's services. There are several examples of national healthcare policies created to help guide physicians' use of SM such as by the American Medical Association (AMA), U.K General Medical Council (GMC) and, the Australian Health Practitioners Regulation Agency (AHPRA). The American Medical Association (AMA) has formulated a new policy which aims at helping physicians to maintain a positive online presence and preserve the integrity of the patient-physician relationship. The AMA's new policy outlines a number of considerations physicians should weigh when building or maintaining a presence online including [37]:

- Use privacy settings to safeguard personal information and content to the fullest extent possible on social networking sites.
- Routinely monitor their own internet presence to ensure that the personal and professional information on their own sites and content posted about them by others is accurate and appropriate.
- Maintain appropriate boundaries of the patient-physician relationship when interacting with patients online and ensure patient privacy and confidentiality are maintained.
- Consider separating personal and professional content online.
- Recognize that actions online and content posted can negatively affect their reputations among patients and

colleagues, and may even have consequences for their medical careers.

Another example of policy is by the U.K General Medical Council (GMC) which was published in March, 25, 2013 and came into effect on April, 22, 2013 regarding the practitioners' use of SM. In this guidance, it explains further of how doctors can put these principles into practice and it highlights on the privacy aspect, maintaining boundaries, maintaining confidentiality, respect for colleagues, anonymity concern and also addressing the conflicts of interest issue [36].

In Australia, the Australian Health Practitioners Regulation Agency (AHPRA) has regulated a SM Policy [44] and this policy was developed jointly by the National Boards to help practitioners understand their obligations when using SM. It applies to all registered health practitioners in Australia. When using SM, health practitioners should remember that the National Law, their National Board's code of ethics and professional conduct (the *Code of conduct*) and the *Guidelines for advertising regulated health services* (the *Advertising guidelines*) apply. In this policy, it explains how the National Law and the following existing codes and guidelines relate to SM; section 133 of the National Law, which establishes obligations about advertising by registered health practitioners, and the *Advertising guidelines*, and the relevant National Board's *Code of conduct*. The policy emphasizes the health practitioners should be aware of their ethical and regulatory responsibilities when they are interacting online, just as when they interact in person. This policy provides guidance to registered health practitioners on understanding their responsibilities and obligations when using and communicating on SM [44].

C. Malaysia Medical Act 1971

Malaysian practitioners are bounded to ensure the highest standards of medical ethics, education and practice in the interest of patients, public and the profession through fair and effective administration of the Medical Act 1971. It is an act to consolidate and amend the law relating to the registration and practice of medical practitioners and for national purposes to provide for certain provisions with regard to a period of service in the public services after full registration as a medical practitioner; and to make provision for purposes connected with the aforesaid matter [45]. This act used to govern the practice of healthcare practitioners in Malaysia and the act also serve as the basis in governing the practice of healthcare through other mediums increasingly recognized such as using SM and other online methods.

D. Malaysia Telemedicine Act 1997

The introduction of Telemedicine Act 1997 is one of the legislative initiatives by Malaysia to ensure that the law is keeping pace with the development of electronic medicine and telemedicine. This act was first enforced in Mac 1997 with the objective to provide medical services from remote locations using electronic medical data and prescription

standards, with knowledge that their treatment will be covered under insurance programs. This act will read together with the Medical Act 1971 and also refer to the Malaysia Medical Council's (MMC) Code of Professional Conduct [46]. This act is divided to six sections, mainly focus of person who may practice telemedicine, certificate to practice telemedicine, consent of patient. The interpretation of this act is, Telemedicine as define as 'the practice of medicine using audio, visual and data communications'. It shows that telemedicine must include all these types of communication (audio, visual and data communications) in order to use this act [47]. This act also requires fully registered medical practitioners to obtain a certificate to practice telemedicine, which is valid for three years, from the MMC. Medical practitioners must be fully licensed but can hold a license granted from within or outside Malaysia. If a telemedicine service must be performed by a medical practitioner resides outside Malaysia, he must be a fully licensed medical practitioner holding both a practicing certificate and a certificate to practice telemedicine. Failure to comply with the Act could result in a fine up to RM500, 000 (US\$125,000) and or imprisonment up to five years. Besides, written consent of the patient before practicing telemedicine and ensures patient confidentiality of their digital records is also stated in the act. Failure to comply with this part of the Act could result in a fine up to RM100, 000 (US\$25,000) and or imprisonment up to two years [47].

E. Personal Data Protection Act (PDPA) 2010

Besides Medical Act 1971 and Telemedicine Act 1997, Personal Data Protection Act (PDPA) 2010 is also used to govern the SM usage in online healthcare activities. This act was gazetted in June 2010 and forced on 15 November 2013 with the objective of protecting the personal data of individuals with respect to commercial transactions. This act applies to any person who collects and processes personal data in regards to commercial transactions. The seven principles of the act are; general, notice and choice, disclosure, retention, security, access and data integrity. Personal data relates directly or indirectly to a data subject, who is identified or identifiable from that information, or from that and other information in the possession of a data user, including any sensitive personal data and expression of opinion about the data subject. For example: name, identity card number, date of birth, mobile number and etc. In the case where personal data processing is outsourced to a third party, known as the data processor, it is the responsibility of the data user to ensure that the data processor provides sufficient guarantee to protect the personal data from any loss, misuse, modification, unauthorized or accidental access or disclosure, alteration or destruction. The act affects the personal data life cycle management process from the point personal data is collected, used, stored and destroyed. This act applies to customers, employees and third party service providers' personal data. Through this act, a company's way of doing business will definitely be affected as business processes are required to be refined to comply with the PDPA requirements.

Most importantly, a central repository may be required for consent management. The process becomes more complex when cross border personal data transfer is involved. The penalty for non-compliance is between RM100k to 500k and/or between 1 to 3 years imprisonment [48]. However, Personal Data Protection Act 2010 only covers the private sector which is transactional data with government agencies can be extended and demanded if it applicable. The law is applicable to data users in three situations; which either the data user is established in Malaysia, the processing is carried out by any person employed or engaged by the data user in Malaysia, and if the data user is not established in Malaysia but uses tooling to process personal data in Malaysia. All of these three situations are lawful to be judge under this act. The value of personal information towards business especially though social network where one of the medium that facilitation information flow with less limit of control in term of privacy [49]. Thus, according to section 43 of the Malaysia PDPA 2010, data subject is given the right to prevent processing of personal data for purposes of direct marketing or other not related to the on-going business transaction. Even section 129 of the Malaysian PDPA 2010 prohibits the transfer of personal data to a place outside Malaysia unless protection is guaranteed. However, there is still has a loophole when cross several new online media and technologies such as cloud computing that personal data may leak from this diffusion of network [50].

F. Malaysian Medical Association (MMA) Code of Ethics (2001)

The Malaysian Medical Association (MMA) code of ethics is to advise and assist its members on ethical problems in the course of the professional work such as in the doctor-patient relationship. This ethics sets guidelines for the proper conduct of the doctor practicing in Malaysia. Some of these values are extracted here for the guidance of the such as; the physician must maintain the utmost respect for human life and the human person, physician must stay abreast and practice in accordance with current medical knowledge, continually improve his skills and seek help whenever needed, should not recommend nor administer any harmful material and should render help regardless of the financial ability, ethnic origin or religious belief of the patient, they should protect the patient's confidentiality and adopt an appropriate manner of communication. He should examine a patient of the opposite sex in the presence of a third person whenever feasible and, he should not criticize another physician in the presence of patients or health personnel [51]. Overall there are eight sections of the guidelines. Section I highlights on good medical practice containing; the individual responsibility, the MMA and Medical Ethics, summary of duties of doctors to the patient, profession and oneself. Section II contains the ethical obligation of doctors to the patient consists; consent for medical examination and treatment fees, professional confidence, the doctor and the law courts, dying patient, statutory requirements as to disclosing, medical records and reports, medical certificates, privileged communication,

medical research, doctor and non-orthodox forms of healthcare, telemedicine transplantation, intimate examination and termination of pregnancy. Section III emphasizes on doctors and his colleagues includes; examination in consultation, acceptance of patient, doctor in relationship with third party payers, panel doctors, the doctor and the managed care organization, fee splitting and/or any form of incentive as an inducement for referring a patient. Section IV and V highlight on the relationship of doctors with other professionals and relationship of doctors with commercial undertaking such as commercial enterprises and pharmaceutical services. Section VI and VII addresses on advertising and canvassing and, setting up practice for their healthcare services while the final section emphasize on the disputes between doctors also the disputes between a doctor and his patient [51].

X. SUMMARY

The healthcare industry is beginning to take the advantage of SM's potential to responds towards the changing trends of health consumers in healthcare seeking. The benefits of SM are varying to the healthcare organizations, health practitioners and also the health users which are believe to offer capable and practical solutions as compare to the traditional approach in some unique ways. Some issues surround the use of SM mostly on providing secure environment to protect the privacy and security of the health information shared through SM in which this has results challenge to produce factually accurate content with all these requirements to be operationalized without a very high cost. Analysis from four leading ethical theories; Kantianism, Act Utilitarian, Rule Utilitarian and The Social Contract Theory (SCT) were found ethically accepted the use of SM as health organizational strategic advantage towards leveraging a borderless health benefits to the health consumers. The practice of SM in health activities is also governed by several related national and international policies, laws, regulations and this mostly becomes the validation of the ethical theories' justifications.

XI. CONCLUSION AND FUTURE ENHANCEMENT

In a nutshell, the new technologies are changing how healthcare is operating on a global level. In order to realize its full potential, all stakeholders need to come together to reflect the structure of SM and be willing to contribute, in order for the new system to achieve its potential. Although there are few things that can be obstacles to the SM usage but still, the benefits of engaging on social may outweigh the risks. SM provides the perfect tool to help healthcare organizations and physicians begin to close the gap in technology adaptation. Therefore it is essential for hospitals and health providers to rethink their healthcare marketing mix to include SM. The benefits of integrating SM into healthcare marketing efforts are priceless, from improving patient care to gaining media coverage to attracting new patients and staff. With these

benefits come the ethical and legal concerns about preserving patient confidentiality and protecting patient privacy. Employers need to understand that employee behavior is influenced by SM in ways that are not yet completely understood. As for future enhancement, the healthcare organizations should consider this issue as they codify policies and procedures on employee and organizational use of SM thus they should train and monitor their employee's behaviors to make use the fullest benefits of SM in their business activities.

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