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## Social Networking Sites an Enabler for Implementation for Telemedicine in Developing Countries

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### **Abstract:**

*Social Networking Sites (SNS) are pages or sites through which individuals or a group of individual shares and communicate over issues relating to a variety of topics. It plays an important role that is significant in the fields of agriculture, business, banking and tourism, especially in transfer information, search, advertising and interaction among the customers. Telemedicine is provision and support of health care with the use of Information Communication Technology. It does not limit its services to communication between doctors and nurses but also in diagnosis, consultations monitoring and surgical services. It enables citizens irrespective of their location from medical services to access and seek medical attention without moving from a remote area to an urban area with these services. A good number of developed countries like the United States of America and the United Kingdom have implemented telemedicine and the results can be felt. In some developing countries, implementation has been undertaken but with challenges involved. For instance, countries like Kenya and Bangladesh are working tirelessly to implement telemedicine to improve the provision of affordable healthcare services to its people. Social Networking Sites are the most effective means of online communication that has been integrated in political, social and economic life of users. This study is a result of literature review evaluation to establish role of social networking sites in implementation of Telemedicine in developing countries.*

**Keywords:** *Developing countries, social networking sites, healthcare, ICT*

### **1. Introduction**

Breen & Matusitz, (2007) defines telemedicine as the use of advanced communication technology, within the context of clinical health, that deliver care across a considerable physical distance. In other words, they define it as the provision of healthcare by use of Information Communication Technology. With this, medical patients from considerable physical locations benefit from healthcare services irrespective of their location. Such communication technologies, entails computerized gadgets, allowing doctors, nurses and other health professionals to provide health services to patients thousands of miles away. Nourish (2002), on the other hand, defines telemedicine as the provision of medical services through the use of telecommunication and ICT. Social Networking sites (SNSs) according to White et al (2009), are any web-based applications that allow individuals to communicate, collaborate and share with each other. This usually happens through individual user profiles enabling users to share information and join networks on geographical locations or interests. Furthermore, Kaplan and Haenlein (2010), defines SNS as a group of internet-based applications that build on the ideological and technological foundation of web 2.0 and that it allows creation and exchange of user-generated content. Due to the evolving nature of changing uses and general expansion of social media, so does its definitions, (Cohen,2010), summarizes more than 20 varied definitions, for different perspectives. Important characteristics and nature of social media identified include: 1) they depend of information technology and therefore they are online tools, applications, platforms and media. 2) they enable web content development, collaborations and sharing by individuals and the public making it a peer to peer communication channel. (Wikipedia, 2013a) defines social media as the means through which create, share and transmit information and ideas in virtual communities and networks. While discussing about social media, social networking has to be considered, as defined by Wikipedia, (2013b) as "an online service, platform or site that focuses on facilitating the building of social networks or social relations people who, share interests, backgrounds, activities or life connections in real life." Since the number of SNSs users have been increasing over the years, it is evident enough that quite a number have access to information technology enabled components and therefore they can be reached through these networks. SNSs use has created an immense possibility for physicians, doctors' nurses and patients to send and receive live videos, text, sound and high-resolution pictures to distance locations as well as get the response on real time basis. The use of SNSs in not only a challenge in developing countries but also in developed countries. However, to implement telemedicine through SNSs requires management of change since users of SNS use them for many other uses like social and political engagements.

This study seeks to address the implementation of telemedicine through SNSs in developing countries through a review on literature related to social networking sites and telemedicine. The researcher believes that this study will unveil

SNS as an enabler for the implementation of Telemedicine in developing countries with an aim of providing affordable and quality healthcare.

## 2. Healthcare Services in Developing Countries

Access to affordable and quality healthcare services have always been a big problem, not only in developing countries but also in developed countries. Provision of health care is critical in any governments and nations irrespective of their financial capability and stability. Government health institutions, policy makers and researcher in many countries are making continuous efforts to provide affordable health care services to its people. Developing countries have not been left behind in the quest for cost effective healthcare systems. Kenya like other countries, is at piloting stage in implementation of universal health care system. Population increase in developing countries is posing a greater challenge in provision of health care services, since this strains the already existing healthcare resources. According to Kurji et al (2015), demand on global level for health care has increased over the last few decades. Furthermore, in developing countries, there is less access to healthcare services within their locals (peters, 2008). Due to this, resources have been constrained in the health sector. Scholars have also raised concern over the medical professionals moving from developing countries to developed countries. A report from the International Herald tri, (2001), indicates that around 23000 qualified health professionals emigrate annually. With this report most of the developing countries where health care need and related problem are greatest, suggests that resources are constrained more. Corcega T.et al,(2000) and Mangwende B., (2001), suggests that over 150000 Filipino and 18000 Zimbabweans nurses work abroad. With these statistics, it is evident enough that medical resources are strained to the limit in developing countries. This situation leads to the concentration of patients to few medicals doctors and nurse who are stationed in urban areas after travelling from distant locations to receive the needed healthcare services.

## 3. Role of Social Networking Sites in Telemedicine Implementation

To overcome the barriers and challenges, health care institutions can implement telemedicine systems to improve the service to all citizen in their countries irrespective of their physical locations. The advancement in Information and communication Technology, including the SNSs open up avenues for provision of affordable healthcare services not only in developing but also in developed countries. According to Bali S. (2018), telemedicine is becoming a viable solution for governments to provide healthcare in developing nations. Since telemedicine employ the use of telecommunication tool, SNSs being one of the ICT tools for communication, it can be a better enabler of implementing telemedicine in developing countries. According to Tommo (2012), SNSs enable individual to connect and share information on topics of their interest. These sites have become part and parcel of the communication between different individuals on one hand. On the other hand, they are mainly inexpensive and widely accessible electronic tools according to Wikipedia. Social media can also function as a supportive system for adolescents' health, because by using social media, adolescents are able to mobilize around health issues that they themselves deem relevant, (*Patton et al, 2016*). *More so, study by Holmberg et al (2018)*, shows that adolescents undergoing treatment for obesity could find personalized content related to weight loss expressed through social networks. Another study show that medical students acquire materials that are related to their field of study through social networks, (*Jha et al ,2016*). Study by Global social media research summary 2019 shows that, out of the 7.676 billion world's population, 4.388 billion are connected to the internet, 3.484 billion users are active users of social media, 3.256 billion are mobile social media users and 5.112 billion are unique mobile users. With this report, it is evident enough that SNS have connected larger population to share and get information through these platforms. Moreover, ITU (2019), estimates a 56.3 percent of global population, representing 4.1 billion people, will be using the internet. The chart below shows ever-increasing usage of internet in the world.

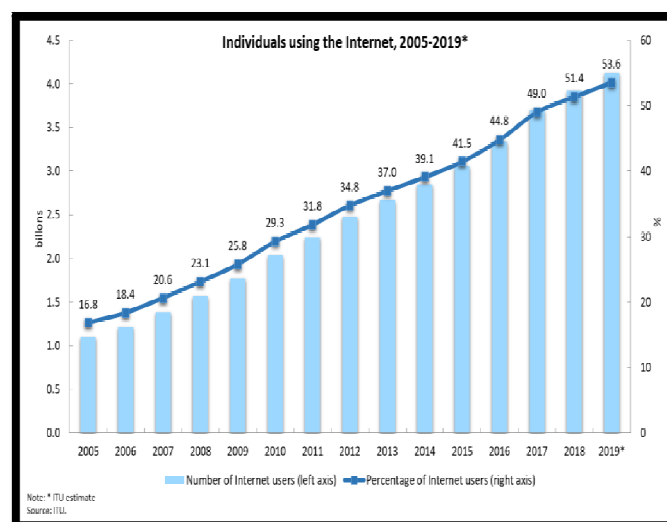


Figure 1

Source: ITU Regions, and the UN M49 Developed/Developing Country Classification (2019)

If this SNSs can be integrated into telemedicine system, can facilitate efficient and affordable connection between not only physicians and medical practitioner. But also incorporate nurses and all service provider to patient irrespective of their physical location.

### 3.1. Challenges of Implementing Telemedicine through Social Networking Sites

For any project to be implemented successful, support from relevant quarters like administration, physician, nurses and patients is essential, without which no developments can be made. The readiness of the leaders in an organization to accept change is key to implementation of advanced technology (Jennet et al., 2009). Studies have shown that, resistance to change, has hindered the implementation of telemedicine (Bali et al, 2016, Alaboudi et al, 2016, Hassibian and Hassibian, 2016, Bishop et al, 2013, and Ghani et al, 2015). Furthermore, high speed internet services have not reached the remote areas of most of the developing countries which hinders the implementation of telemedicine and ICT tools.

## 4. Conclusion and Recommendations

Provision of affordable and enhanced healthcare services is essential for any country, either developed or developing. Its important that developing nation realize the potential of telemedicine system in providing enhanced medical services to its people. Most of the challenges faced by developing countries can be dealt with. It is high time developing countries rethink of using the inexpensive Social Networking Sites that are readily available for connecting masses irrespective of their physical location. Engaging with countries of good will, can help in unleashing the potential SNSs can enable the awareness and implementation of telemedicine. This will in turn enable stakeholders in developing countries in embracing innovation and ICT improving healthcare services and improve human lives. There is need to enhance research on integration of SNSs to telemedicine and how best they can work together for the betterment of healthcare systems. If this can be put into consideration, developing nations as well as developed countries have hope for improved and affordable healthcare services.

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