

Health 2.0 powered by cloud applications: The solid promotion of healthcare systems

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ABSTRACT

Health 2.0 is one of the important facet incorporated with the computing and technologies in the domain of Medical Sciences. Health 2.0 is helpful for proper communication in offline mode or by internet. Health 2.0 is the emerging area of interest among the health professionals such as medical practitioners, patients, medical researchers for allocation of ideas and views on various topics. It is also usually treated—*Medical 2.0 or Medicine 2.0 or Med 2.0. Health 2.0*. These promote the complete healthcare professionals including hospitals and hospital administration, clinical researcher and so on. It is also accountable for the public health development and promotion. This is the magnificent tool for intelligent and advance communication through online mechanism and sharing of data, information and also Audio-Video materials of health or medical concerned. This paper mentions the utilization of web 2.0 and its increasing interaction for better healthy communication backed by Cloud Computing and Virtualization. This paper also mentions the strategy of Health 2.0 in brief manner.

KEY WORDS: Health and Medical Science, Medical Electronics, Computing, Health 2.0, Medical 2.0, Medical Research, Communication.

1. INTRODUCTION

“Health 2.0 is the use of specific set of web tools (blogs, podcasts, tagging, search, wikis etc) by actors in health care including doctors, patient and scientist using principles of open source and generation of content by users, and the power of Networks in order to personalize health care, collaborate and promote health education” (According to the Wikipedia). Here the web technologies which include the Ajax, PHP, JavaScript, XML have played an important role for development of Health 2.0 based interface and sites. It is a fact that the Health 2.0 is liable for the communication of advance level including sharing of ideas and views among the health professionals, patient to physicist, pharmacist or clinical/pharma researcher to physician. Health 2.0 is required for the promotion and advancement of medical tourism which includes health awareness among the common masses (Doukas, 2010), (Kagadis, 2013). The reason behind this is, because one can share or ask any question to any professionals (or group of professionals) directly by means of web 2.0 or blogs.

Objective: The following aim and objective played important role or conducting this policy based study. These are (but not limited to)

- To recognize and learn about Health 2.0 and Medical 2.0 and related field and also utilization (also possibilities) of web 2.0 in the field of Medical Sciences.
- To be familiar with up to date and contemporary utilization of Health 2.0 in medical fields.
- To find out the core and main challenges as well as issues related to Health 2.0 and Med 2.0.
- To know the contemporary trends and uses of Health 2.0; including the technologies required.
- To find out the main challenges and issues of Health 2.0.

2. MATERIALS AND METHODS

Web 2.0, Web Technology: The Fundamentals: Web 2.0 is a concept and a mechanism which is responsible for flow of the information, data, and knowledge including audio and video materials among the healthcare professionals, common masses, educationalist and academician, as well as others interested to participate in this platform. Web 2.0 provides user centric display as well as design for cooperation (Depicted in Fig: 1).

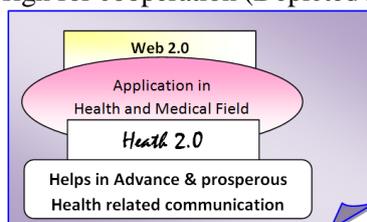


Figure.1. Health 2.0 and its Root (Web 2.0)

Importantly Web 2.0 is dedicated for formation of virtual reality in many contexts. In the development phase the Web 2.0 was regarded only as social networking (and also communication) site but nowadays the sphere of web 2.0 exceeds the boarder of social networking along with blogs, wikis, web application, mashups, video sharing and others (Giustini, 2006; Paul, 2013).

It is the amazing tool which can construct an individual as web developer including as the content developer as by this anyone can join the system. By joining one can read-write and even modify any type of content/s. importantly, this is rendering a chance to common mass as well as person to do several activities or simply act as a web based (not limited to the) content writer, content developer, and content designer (Hughes, 2009; Paul, 2014). Web 2.0 is a 'web platform' and a mechanism that revamp the old model of centralized websites and web resources and moves the power of web/ internet to the desktop'. The application with utilization of this system in several type fields brought many new fields which includes the integration along with application of web 2.0 in Educational Sciences launched the Edu 2.0, Learn 2.0 and also similar type of thought including the incorporation and appliance in Governmental activities emerged Gov 2.0 or Government 2.0.

Similarly the integration along with utilization of web 2.0 in health and medical science or health science resulted the Health 2.0 which is also liable for the communication and information sharing about the medical topic or matters among the medical as well as health professionals and regular masses directly (apart from several indirect communication) (McLean, 2007).

Health 2.0: Beyond Medical 2.0: Use of several types of blogs in addition to social networking sites (wikis including video sites) such as You Tube among the masses related to health and medical field is another reason of the development of Health 2.0.

Health 2.0 is actually not meant for professional communication between the health and medical professional and it is also for the communication between medical practitioners, practitioner to druggist/ pharmacist, medical and health professional to common masses, among the individuals about the sharing and distribution of medical information, files and also even audio/ video. Health 2.0 is moreover endorsing the medical tourism. The reason behind this, as one possibly will able to know any kind of information and content about any topic and from where these facilities are completely affordable (Rolim, 2010; Sandars, 2007).

Importantly, the Health 2.0 also helps in 'Tele Medicine' system where communication between parties may be conducted with the help of data or even online or stored audio or video at the same time. This is most cost effective method which is using separate individual satellite or VSAT. The ever-increasing rate of IT in the field of health sciences is also accountable for a new facet or concept Med 2.0 that mainly deals with internal as well as complex topic and aspect of medicine among the health practitioner, medical and allied health researcher (than that of in-general or common masses on health related topic).

Cloud Computing: Allied Technologies and Smarter Health System: Cloud computing is the virtualization of tool and approach required and implemented for the minimizing of IT resources. Cloud computing system and platform mainly helps to distribute IT tools by the centralized and core server. As far as its nature is concerned, though it is decentralized yet depends on several type of centralized equipment and service platform (Sandars, Sultan, 2014).

Health 2.0 is the communication in between the health and allied peers in addition to common masses paying attention in health information thus cloud computing strategy plays an important and valuable role for the proper health 2.0 utilization. By this one can store, upload, as well as download audio-video, and also some other content by cloud computing and allied platform. Cloud Computing mainly brings the following type of specifications:-

- It saves money of concerned organization (Directly and indirectly) as only one server provider many several types of clients at a time.
- Cloud Computing also helps in energy and power consumption furthermore helps in Energy Informatics promotion.
- Cloud computing also helps for creating the centralized recourses of the related fields and more importantly it also promotes the virtualization.

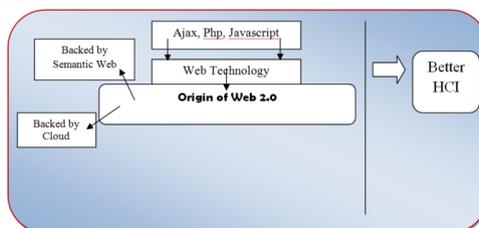


Figure.2. Web Technology and better HCI Systems

Many technologies are included in the domain of web 2.0 which includes the client side technologies like the Asynchronous, JavaScript, XML (Ajax platform), the Ajax Frame works etc. importantly for structured data format Document Object Model (DOM) is as well imperative tool. Scripting languages are other valuable tools which include the VB Script, Java Script, and Ajax. Adobe Flex is also accountable for the large type of grids, charts and in a little while. Some web browser is also required which includes Google Chrome, Fire fox.

Health 2.0 and Solid Utilization: The health 2.0 and wikis are responsible for bringing of many types of professional under one roof; including the patient, physicians, providers as well as players (See Fig 3 for details). Essentially the health 2.0 is also helpful for the bellow mentioned aspects—

- Communication as well as sharing of view, expression and information sharing between the medical professionals with the patients or common masses, clinical researchers with the pharmacist, user to user and so on.
- Sharing of information and video of any kind of treatment including operation as well as critical care videos.
- Strengthening the medical awareness, clarification of any biased or complex thought connected to medical and allied field.
- Proper collaboration and cooperation among the stockholders in the world of healthcare and medicine.
- Clarification of any concept including the theories and challenges of medical issues among the medical practitioners.
- Sharing and collaboration of own insight, views of any health as well as diseases related problems and so on.
- Introduction of the web based medical services and systems for solid health care to the consumer, caregivers, patients and also bio medical researchers.
- To promote as well as highlighting of health related facilities of any kind of hospitals and clinical centers in the course of web advertisement.
- Promoting as well as providing Tele-Medicine services is another aspect to be considered.
- Delivery of online Videos as well as Full Audio/ Video material and operational Videos to the medical and health practitioners.
- Health data and health information (their combination) and creation and building health Informatics.
- Health 3.0 is another emerging thought of advance health 2.0. In this system utilization of ‘*semantic web*’ play a lead role and accountable for the location awareness including the emerging ‘internet of things’ (IoTs) along with embedded sensors.
- Doctor 2.0 is another term and concept of health 2.0 wherever doctors not only capable to share each other’s views but also sharing case studies.
- Patient from the remote places are also able to be in touch with doctor/s or clinical houses with the help of Health 2.0.
- It is also enlarge and promotes the medical and health related ethics and which ultimately helps the modern medicine.
- The primary and the ‘First Aid’ medicinal application is also possible by the introduction of the Health 2.0
- Health 2.0 and similar domain may also applicable in further consultancy with doctors as well as patients.
- The collaborative medicinal aspects including the joint decision, joint medical treatment, and medical board formation may be empowered by the Health 2.0.
- In the segment of researcher community which includes the conference of medical topic as well as online webinar positively possible by means of Health 2.0

It is also important to note and promote the health care up-to-date systems and also manageable as well as equipped for enhanced hospital moreover healthcare management system.



Figure.3.Wider Benefit of Health 2.0 in Present scenario

Health 2.0 and Medical 2.0: Basic Types: Health 2.0 is useful in many perspectives and it may be classified as under:-

- In the Research & Development for communicating among the researcher along with scientist and researcher regarding health and allied research, innovation etc. and it’s sharing. In Medical Education, among the professor, medical educationalist and students communication.
- In Sharing and Collaboration, this includes (but not limited) to the general sharing about the health topics. In Managing Particular Diseases more clearly for finding the length of treatment and sharing of critical as well as complex diseases solution.

3. RESULTS AND DISCUSSION

Findings and Potentials: This research dugout the following facets-

- Medical 2.0 is also the part of Health 2.0 furthermore recognizable with only doctors and health professionals.
- Medical Professional around the world using Med 2.0 for further decision making and promotion of better treatment.
- Health 2.0 also promotes the concept of Medical and Health Tourism along with Tele-Medicine amenities.
- Research & Development activities and its Promotion by sharing of Information related to medical field is another important concerned.

Suggestions and Direction

- Technologies which includes but not limited to the *PhP*, *Ajax*, *Perl* needed for the sophisticated Health 2.0 creation, designing along with development.
- Health 2.0 as well as similar type of Med 2.0 and its employment is very minimum in India due to lack of IT orientation of Medical practitioners. So, it is a fact that we need to introduce this in the Medical curriculum along with organization of seminar, conference among the medical and healthcare professionals.
- Proper awareness about health 2.0 and to make common masses aware of its advantage is also important.
- The patient party should aware that it is a health consultancy services and from the remote places and so further treatment is completely necessary for most cases.

4. CONCLUSION

Health 2.0 and Medical 2.0 are gaining popularity around the world. It is getting wider potentialities among the medical practitioner as well as health professionals and for the common masses. By this, professional's discussion among, detailed information on medical related matters, clarification, further knowledge and for clearing any doubt etc. by the Health 2.0 professionals is possible. It is important to note that, Health 2.0 is being used for better treatment as well as professional development in addition to for clarification of any doubt. A Wikipedia reports states that about 245,000 physicians in United States are utilizing Web 2.0 for their practice and professional development. India and developing countries, no doubt still suffer from less consciousness concerning utilization of Medical 2.0 and thus it is essential to aware the practitioner, medical researcher furthermore common masses for the further growth and utilization of treatment and healthy health systems.

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