

Internet of Medical Things: Note on Futuristic Healthcare

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Internet of things (IoT) was first coined in year 1999. Since its inception by British entrepreneur *Kevin Ashton*, IoT has gained lot of publicity among the business class as well as service class society and even at government levels. IoT refers to the connectivity between the devices among themselves through a series of network via internet. IoT since 1999 has been found to be of broader applicability from physical devices such as phones, electronics at home such as home appliances, buildings, construction industry, ship industry to healthcare industry. Internet of Medical things (IoMT) is a newer concept signifying applicability of IoT into medical industry or in other words healthcare industry. The present letter has thus been written to throw a light on internet of medical things and its application in shaping the future of healthcare industry.

Internet of Things (IoT) is broader terminology which signifies connectivity between devices through a network with Internet being important part of it. These days' technological advances are making things smarter. We have smart phones with us which has completely changed the user interface with respect to technology and his everyday affairs. With smarter gadgets all around us, the lives have been transformed completely compared to past decades. Ever since the inception of Internet of Things the term has been found highly applicable in different industries. We have smart watches, smart wrist bands and smart electrical home appliances. Connecting these devices through internet and using the recorded data through sensors and smart electronics users could use the information in real time basis. Through cloud computing integrated into the network a person could really make smarter decisions which would help him/ her in saving his / her quality time. [1] Internet of Things has potential to be next wave in technology space after mobile phones and internet. It is upto the potential of connecting around 28 billion things to internet by 2020. IoT will connect things which would not be restricted to the people, plus it would require greater fragmentation of software applications and hardwares amidst the reality of data explosion. IoT will define the next future in a way that everything which could be connected will be connected. [2] Internet of Medical Things (IoMT) is a newer term which signifies the applicability of IoT into medical profession or healthcare system. All the applications of IoT would be applicable to IoMT. The main features of IoMT would be a.) Anything – Any device, b.) Anyone – Any body, c.) Any service – Any Business, d.) Any path – Any network, e.) Any place – Anywhere, f.) Anytime – Any Context. [3]

Internet of Medical Things simply signifies connecting the smart medical devices having in-built sensors and

actuators which could record data on real time basis and sharing the data through internet over another device. It has high degree of applicability to the healthcare system.

Following are high rate application of Internet of Medical Things

- 1. Newer Product development:** The healthcare, pharmaceutical, medical device companies would with collaboration with digital companies develop smarter medical gadgets
- 2. Real time data generation:** Internet of Medical Things through cloud based technology would make real time data available to the healthcare practitioners and providers
- 3. Treatment adherence monitoring:** IoMT will make it accessible to the healthcare provider whether the patients are following the treatment regimens and that too on time. If they are not adhering to the guidelines as prescribed the patient could be intimated about the possible after effects if the regimens are missed or forgotten.
- 4. Smarter decision taking applicability in the hands of healthcare provider:** The Internet of Medical Things would help the healthcare providers in taking smarter real time decisions. They could really save the lives of elderly patients in danger and those suffering from chronic illnesses.
- 5. Improved healthcare infrastructure:** IoMT would help in enhancing the healthcare infrastructure such as EHR (Electronic Health Records), etc.
- 6. Customized product development and care:** Through getting real time data, the physician could customize the healthcare provided by him to the patient and thus more personal care would be provided improving the overall quality of healthcare system
- 7. Reduce morbidity and mortality:** IoMT would help in reducing the morbidity and mortality of the patient, thus improving the DALY (Disability adjusted life years)

Keeping in light the various advantages the Internet of Medical Things would have on overall healthcare system, data integration and data management would be a great challenge. However, this could be handled through robust IT system installed at the institution locations.[4]

In the end, I would like to conclude, that Internet of Medical Things really would impact the healthcare system with enhancing the serviceability of the healthcare providers. Overall disease management will improve and become smarter and better. Thus, we shall readily look at the implementation of Internet of Medical Things in the healthcare system globally. Connecting doctors, pharmacists, nursing staff, pharmaceutical companies and Medical devices with the patient would really revolutionize the future of healthcare.

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