Advances in Mobile and Wearable Technology Allowing Providers Access to Vital Patient Data

Several mobile applications and wearable devices are now present in the health sector to monitor patient data such as vital signs or fitness related details. Information technology and artificial intelligence are now involved in the health care space as a way to fully digitize health systems. The usage of these medical wearables can add precious values to healthcare with more development in diagnosis, investigations, and treatment of the patients (Haghi, Thurow & Stoll, 2017).

Doctors can use medical wearables to create specific medical programs convenient to patient needs. Moreover, the accurate medical parameters in mobile gadgets can detect warning symptoms, and probable complications in earlier stages, which may allow better treatment and prevention. Healthcare professionals can rely on wearable devices to remotely follow up medical signs and symptoms of their patients. They will be also sure that their patients are following the treatment plan and taking their medications on time. What's more, the stored patient data on mobile and wearable devices are all real-time information which helps to make a precise analysis of the patient medical condition (Park & Jayaraman, 2003).

Automated medical reports can be produced regularly and easily shared by medical specialists to take proper clinical decisions. Clinicians will also be able to easily compare the clinical profile of patients and evaluate their response to the treatment plan. The remote monitoring of patients' health conditions through wearable devices can save a lot of time and effort for the patients as they minimize their frequency of visiting medical specialists.

Many wearable devices can be used as electrocardiograms (ECG) and electroencephalogram (EEG) to monitor heart rate and electrical activities of the brain. In addition, other vital signs such as skin temperature, blood pressure...etc. can be regularly monitored which make these devices providing multi-task vital signs assessments. For example, Cardiac patients and patients who suffer from Epilepsy can be easily followed by their doctors to detect serious attacks as early as possible.

Many researchers examined how depending on medical wearable devices can improve the quality of health services. They concluded that these technologies are important tools for monitoring population health. The internet of things (IOT) is a new term introduced to many industries including health sector to monitor health services by wearable devices. Researchers defined IOT as "the network of physical objects which are supported by embedded technology for data communication and sensors to interact with both internal and external objects states and the environment" (LeHong & Velosa, 2014).
As an example of this process, wearable devices are used to share data about motion tracking (measurement of movements) which is useful in medicine and sports. It can share information about risk management, studying patients' habits and monitoring health of senior citizens. Moreover, the wearable trackers can be a strong motive for patients to perform more exercises with a continuous record of their activity through smart applications. They can know the distance they cover during the day and the amount of burned calories and physical efforts, so they may be more encouraged to maintain a healthy lifestyle (Bagot et al., 2018).

References

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