



Future Healthcare Disruptors



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Introduction

The healthcare industry has been disrupted several times over as it was integrated with the information and communications technology industry (ICT). Various software programs were made available to healthcare professionals that helped reduce duration of non-priority tasks and thus, saved time. Information technology (IT) applications and IT professionals have quietly gone about their business in making sure patients are assessed, diagnosed and treated appropriately by doctors through carefully managed intervals.

There are numerous software programs that help keep track of patient data such as bed management systems, equipment management, imaging and visualization services (for radiology), medical database and research, medical billing, prescription software, scheduling. Each of these helps the staff to keep track of the daily developments and update accordingly. Potentially overwhelming information is managed easily by a staff that can be as small as 10 to 20 members.



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However, the adoption of emerging technologies could further disrupt the industry, by improving the efficiency of processes which can increase the number of lives saved, and further improve life expectancy.

These emerging technologies include artificial intelligence (AI), augmented/virtual reality (AR/VR), big data, blockchain, robotics, wearables and IoMT (Internet of Medical Things).

Each of these technologies are anticipated to add more value to the IT applications used today, and in some cases, even possibly replace them. (For example, 4D Printing replacing 3D printing and IoMT replacing traditional medical equipment).[1]



[1] Malets, D. (2019, March 27). 10 Most Popular Types of Healthcare Software [2019 Edition].

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Conclusion

The Healthcare IT industry will witness many disruptions in the coming years, with some replacing traditional equipment. Mass-produced medicine capsules and prosthetics may be replaced by 3D printed versions that are more efficient and personalized to suit the treatment of patients.

In terms of storage, cloud and blockchain will be vying for the right to store and manage warehouses of patient data. Blockchain, although secure, has not scaled currently, while cloud, although scaling, will require a team of security professionals. It will be up to healthcare providers and their requirement for data storage. Both blockchain and cloud will have to accommodate for changes in GDPR and any other subsequent data laws passed in other regions of the world. The cloud will dominate the argument for the foreseeable future as blockchain is yet to scale to a level that it can compete with cloud.

Moving over to techniques in treatments, AR and VR will change the way some of the operations are performed. Doctors and staff will have access to a lot more data than they ever have had, and it will be dependent on the expertise of the physician. A competent physician's treatment could be transformed by the technology; however it is not currently capable on functioning on its own. The right balance of human capital and working capital is important to any healthcare organization.

Initial installing equipment and training employee costs may burden clinics and smaller hospitals, but in the long run, it is advisable to begin adding these software and equipment to the overall assets of the healthcare organization. With 5G launching in 2020, AR/VR applications, cloud and 3D printing should be among the top considerations for the organizations that choose to undergo digital transformation. Technologies like blockchain, IoT and robotics will require more time and development before they are market ready, although some use cases mentioned could be used.

These technologies will contribute to the end goal of healthcare, that is, the improvement of life for human beings and raising life expectancies.

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