Paper 2: Health Information Technology

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Medical technology around the world today is flourishing with innovations and breakthroughs, allowing physicians to treat patients and perform operations in ways that were not thought possible even a decade ago. In the field of health information systems, there has been significant progress especially with the introduction of Electronic Medical Records (EMR) and Electronic Health Records (EHR). EMRs refer to a longitudinal record of the health information of a patient which is generated as a result of their encounter with a health care setting. Its uses and benefits will be further explored to illustrate how it transformed healthcare.

Generally, an EMR is a digital record of a patient's test results and medical history. A digital maintenance of the record allows for convenience, readability, and ease of transfer among care providers. It is a vast improvement over the old system of physical papers that needed to be faxed or physically transferred. However, implementing an EMR system across health care institutions within the country is an intensive and a long process, and may increase risks and affect operations adversely if adequate steps to ensure a proper transition are not taken (Hoffman, 2016). Executing and planning an EMR requires the support of nurses and physicians as it requires support from the management since they would be relying on it on a daily basis. Although its initial costs may seem high, however, the long term benefits that can be achieved through its implementation outweigh these costs, as studies estimate nearly a savings of around $142 to $317 billion annually, as a result of reducing errors and increasing efficiency within care delivery (Tchatchoua, 2018).

A number of intangible and tangible benefits are achieved from an EMR implementation. The most prominent benefit is the ease of transfer of health information from one location to another while a reduction of errors and improved efficiency leads to cost-savings. Enhanced efficiency within the system leads to better patient outcomes and satisfaction, thereby increasing reputation and business. Moreover, multiple practitioners are allowed simultaneous access to the patient’s records which especially helps with care coordination and referrals to specialists (Alpert, 2016). A proper implementation of the system will cover the initial costs needed in installing the system and training clinical staff regarding its use. Moreover, it reduces the need to store physical documents which otherwise occupies a large amount of space. Moreover, in certain departments such as radiology, it can significantly reduce costs by allowing a digital transfer of radiological images obtained electronically from the equipment, instead of producing and storing hard copies which otherwise require special equipment to create and view. Radiology is one of several examples where EMRs are transforming health information systems.

Implementing EMRs are also known to produce significant benefits for physicians. A computerized system reduces the need to spend time performing paperwork, allowing them greater time to spend on a patient. The learning curve of EMR software is not too steep, and with a few weeks of training, nurses, physicians, and other care staff could be well-equipped to make use of the new system. Furthermore, physicians and health researchers are provided high with high-quality knowledge databases that can be used to automatically generate useful epidemiological data, linking symptoms and diseases through data analysis and graphs (Rotmensch, Halpern, Tlimat, Horng, & Sontag, 2017). Similarly, for the patient, a key concern is the accessibility of their health records and transferring of information across the continuum of care. Access to their medical records over the internet will help them update their health records, which can also be linked to various electronic devices and record their progress.

Today, there are nearly 300 companies that are marketing EMR systems across health care institutions, clinics and hospitals across the U.S. With the wide range of benefits it provides and continuing innovation, this advancement in health information technology is expected to further transform medical practice in unprecedented ways.

# References

Alpert, J. S. (2016). The electronic medical record in 2016: Advantages and disadvantages. *Digital Medicine, 2*(2), 48-51.

Hoffman, S. (2016). EHR Systems and Liability. In *Electronic Health Records and Medical Big Data: Law and Policy* (pp. 80-109). New York, NY: Cambridge University Press.

Rotmensch, M., Halpern, Y., Tlimat, A., Horng, S., & Sontag, D. (2017). Learning a Health Knowledge Graph from Electronic Medical Records. *Scientific Reports, 7*(5594), 1-11.

Tchatchoua, J. C. (2018). *Strategies for Improving Healthcare Efficiency While Reducing Costs.* Minneapolis, MN: Walden Dissertations and Doctoral Studies.