

Cybersecurity in Healthcare

Student's Name

Institutional Affiliation

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Digital healthcare technologies are dominant across the globe, as they possess a considerable potential to perk up patient outcomes and the quality of healthcare service delivered to patients and families. However, according to Coventry and Branley (2018), there is an increasing concern regarding the safety of digital devices and data. It is the shared belief amongst scholars that the healthcare industry has not kept pace with technological advancements, thereby rendering existing equipment vulnerable to contemporary cyber threats (Kruse, Frederick & Monticone, 2017). Healthcare is one of the primary targets for cybercrime, as hospitals represent rich sources of personal data (Jalali & Kaiser, 2018). With their overemphasis on patient safety, health institutions need to prioritize cybersecurity through national legislation and individual policies. Ronquillo et al. (2018) assert that cyber hacking is responsible for over 80% of damaged health records over the last five years. This data demonstrates the imperative need to integrate the tenets of cybersecurity in modern hospital information systems.

Cybersecurity represents not only a safety concern but also a quality issue in modern medicine. A lesson borrowed from the airline industry following the crash of Boeing 737 Max is that a simple software fault can have disastrous implications (Humaidi & Balakrishnan, 2018). For instance, Slowitner et al. (2018) informs us that expert hackers have the ability to infiltrate cardiac implantable electrical devices (or “CIEDs”), which means they can cause a patient’s heart to stop, pump more slowly or quickly, and even induce heart attacks. Therefore, for the medical practitioner seeking to protect their patients from external harm, proper planning and investment in Information Security Management Systems (ISMS) are crucial undertakings (Park et al. 2010). According to Perakslis (2014), as autonomous practitioners, the ISMS must take

patient, staff, and organizational requirements into consideration, coupled with political support for long-term operability. The paper emphasizes the importance of cybersecurity and the practices that health practitioners and managers can employ to fully enact the concept of patient safety.

## References

- Coventry, L. & Branley, D. (2018). Cybersecurity in healthcare: A narrative review of trends, threats, and ways forward. *Maturitas*, *113*, 48-52. DOI: 10.1016/j.maturitas.2018.04.008.
- Humaidi, N. & Balakrishnan, V. (2018). The indirect effect of management support on user's compliance behaviors towards information security policies. *Health Information Management Journal*, *47*(1), 17-27. Doi: 10.1177/1833358317700255.
- Jalali, M. S., & Kaiser, J. P. (2018). Cybersecurity in hospitals: A systematic, organizational perspective. *Journal of Medical Internet Research*, *20*(5), e10059. Doi: 10.2196/10059.
- Kruse, C., Frederick, B., & Monticone, K. (2017). Cybersecurity in healthcare: A systematic review of modern trends and threats. *Technology and Healthcare*, *25*, 1-10. Doi: 10.3233/THC-161263.
- Park, W.-S., Lee, M.-J., Seo, S.-W., Bang, J.-E., Kim, Y.-E., Son, S.-S., Kim, S.-H. ... Kim, O.-N. (2010). Analysis of information security management systems at five domestic hospitals with more than 500 beds. *Healthcare Informatics Research*, *16*(2), 89-99. Doi: 10.4258/hir.2010.16.2.89.
- Perakslis, E. D. (2014). Cybersecurity in healthcare. *The New England Journal of Medicine*, *371*(5), 395-397. Doi: 10.1056/NEJMp1404358.
- Ronquillo, J. G., Erik, W. J., Cwikla, K., Szymanski, R., & Levy, C. (2018). Health IT, hacking, and cybersecurity: national trends in data breaches of protected health information. *JAMIA Open*, *1*(1), 15-19. Doi: 10.1093/jamiaopen/ooy019.
- Slotwiner, D. J., Deering, T. F., Fu, K., Russo, A. M., Walsh, M. N., & Van, H. G. F. (2018). Cybersecurity vulnerabilities of cardiac implantable electronic devices: Communication

strategies for clinicians-Proceedings of the Heart Rhythm Society's Leadership

Summit. *Heart Rhythm*, 15(7), 61-67. Doi: <https://doi.org/10.1016/j.hrthm.2018.05.001>



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