Leader: Ashton Buck   Researcher: Paige Draughn

Question: In nursing, how does blockchain technology compared with standard electronic health care systems influence patient privacy?

Summary: Blockchain is a new and innovative technology to enhance transactions without a need for central command. These transactions are secured through cryptographic principles. Blockchain is a chain of blocks that contain valuable information that is time-stamped and linked using a reference (i.e., a cryptographic hash or hash value). Currently, blockchain is mostly being implemented in data sharing of health care records and access control (Hölbl et al., 2018). A blockchain can be shared among a network of health care providers to safely distribute data. The conventional "client-server and cloud-based healthcare data management systems suffer from the issues of single point of failure, data privacy, centralized data stewardship, and system vulnerability" (Ismail et al., 2019). The IEEE Access Journal reported the following:

> According to the statistics provided by the Health Insurance Portability and Accountability Act (HIPAA), 13,236,569 medical records were breached in 2018 as compared to 5,138,179 records breached in 2017. Blockchain technology which uses a shared, immutable, and transparent ledger has a great potential to solve the issues of real-time data access, vulnerability, data fragmentation, lack of traceability, security, and privacy which exist in the current client-server architecture (Ismail et al., 2019).

During the coronavirus pandemic, many hospitals in China used blockchain to collaborate with pharmacies to deliver medications to patients' homes. In this scenario, "hospitals could ensure timely delivery of medications with accurate tracking" (Ting et al., 2020). Blockchain technology has multiple uses in the healthcare field, while maintaining client confidentiality.

Conclusion: Traditional systems lack security, ease of accessibility, and real-time data access. The distribution of electronic health records is at risk for compromise. With blockchain, data cannot be modified or deleted once it is stored and "any modification of the data is quickly detected by the underlying blockchain mechanisms" (Ismail et al., 2019). The blockchain technology provides prominent security for any population, which builds a sense of safety and trust for our patients. This program also allows health care professionals to collaborate more efficiently and focus on patient-centered care.

Works Cited

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