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Entitled
Blockchain Based Policy Framework for The Management of Electronic Health Record (EHRs)
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Abstract

The rapid development of information technology during the last decade has greatly influenced all aspects of society, including individuals and enterprise organizations. Adopting new technologies by individuals and organizations depends on several factors, such as usability, available resources, support needs for adoption benefits, and return on investment, to mention a few. When it comes to the adoption of new technologies, one of the main challenges faced by organizations is the ability to effectively incorporate such technologies into their enterprise solutions to maximize the benefits. For the last several years, Blockchain technology has become a popular trend in a variety of sectors, attracting the attention of many governments and industries. Blockchain technology is a distributed ledger with the general purpose of information exchange that requires authentication and trust. It acts as an immutable ledger and allows for distributed, encrypted, and secure logging of digital transactions after the participating nodes or entities have reached a consensus. Because of the asymmetric cryptography and distributed consensus algorithms that have been built for users' security and ledger consistency, this technology has gained a lot of attention.
Blockchain has enormous potential; however, as with any emerging technology, several drawbacks may have negative consequences. To determine how the technology may be deployed, a framework is usually required. However, due to the lack of clear national and international standards for controlling and reducing risks associated with such technology, legal and organizational factors must be addressed before the technology can be implemented. The thesis herein is a proposal for such a new policy framework for Electronic Health Record (EHR) management. Through the establishment of a new policy framework specifically related to Blockchain technology, this proposal aims to achieve the following: first, provide policies to govern sustainable management of the confidentiality, integrity, and availability of information concerning Blockchain applications and solution implementation across health care entities; and second, the prevention and reduction of related information security risks and threats.

Keywords: Blockchain policy, EHR, Blockchain Standards, Information security, Blockchain governance, Blockchain framework.