

Chapter 14

Challenges With the Blockchain–Powered Healthcare Secure System

P. Sumitra

*Vivekanandha College of Arts and
Sciences for Women (Autonomous),
India*

G. Sathya

*Vivekanandha College of Arts and
Sciences for Women (Autonomous),
India*

M. Sathiya

*Vivekanandha College of Arts and
Sciences for Women (Autonomous),
India*

S. Sabitha

*Vivekanandha College of Arts and
Sciences for Women (Autonomous),
India*

A. Gayathiri

*Vivekanandha College of Arts and
Sciences for Women (Autonomous),
India*

George Ghinea

Brunel University, Brunei

ABSTRACT

The expansion of the internet and the growing use of technology in the healthcare system have helped doctors monitor their patients remotely through the use of real-time smart health devices. In spite of this sophisticated system, there are many concerns regarding the sensitive data of the patients being exposed to the world by hackers. Thus, the shortcomings of the healthcare framework can be resolved by leveraging blockchain tools. The mechanism of the blockchain health system works in such a way that an id is assigned to a patient health record, and they can give access to view their health records to the specific health provider of their choice. Eventually, by using this mechanism, the patient's health record is secured from the hackers. Thus, this chapter deals with data privacy of the patient's health, research

DOI: 10.4018/979-8-3693-2268-0.ch014

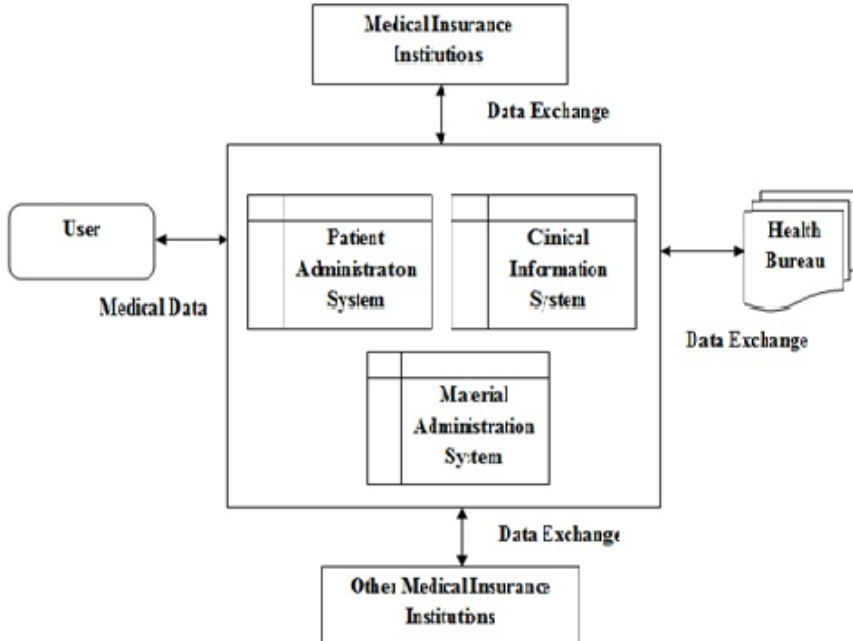
Challenges With the Blockchain-Powered Healthcare Secure System

objectives, issues, and challenges that can be easily understandable and helpful for beginners in their research progress.

INTRODUCTION

The medical field is the main industry where the blockchain is being used to develop creative solutions in many different industries. In the healthcare field, this kind of technology is used to protect and retain patient information between testing conveniences, physicians, hospitals, clinics, prescription drugs, etc. (Tiwari et al., 2021; Yue et al., 2016). Medical administration requires an architecture that has security features for data manipulation and storage (Wang et al., 2021). The complexity and specialization of medical data has led to an increase in the importance of privacy data and refuge. Included in the package are the hospitalization, diagnosis, and registration (Schulz, 2019). The Figure 1 depicts the exchange of medical data as shown below

Figure 1. Exchange of medical data



20 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: www.igi-global.com/chapter/challenges-with-the-blockchain-powered-healthcare-secure-system/353229

Related Content

How Research can Help to Create Commercially Successful Ubiquitous Services

Teea Palo, Kaisa Koskela, Timo Koivumäki and Jaana Tähtinen (2010). *Ubiquitous and Pervasive Computing: Concepts, Methodologies, Tools, and Applications* (pp. 1021-1038).

www.irma-international.org/chapter/research-can-help-create-commercially/37834

Ambient Learning

Fernando Lyardet (2010). *Ubiquitous and Pervasive Computing: Concepts, Methodologies, Tools, and Applications* (pp. 1562-1581).

www.irma-international.org/chapter/ambient-learning/37868

Introduction to Social and Economic Effects of Community Wireless Networks

Abdelnasser Abdelaal (2013). *Social and Economic Effects of Community Wireless Networks and Infrastructures* (pp. 1-11).

www.irma-international.org/chapter/introduction-social-economic-effects-community/74444

DNA-Based E-Voting System

Hadj Gharib and Abdelkader Khobzaoui (2022). *International Journal of Security and Privacy in Pervasive Computing* (pp. 1-11).

www.irma-international.org/article/dna-based-e-voting-system/302008

Hybrid Positioning with Smart Phones

Jingbin Liu (2012). *Ubiquitous Positioning and Mobile Location-Based Services in Smart Phones* (pp. 159-194).

www.irma-international.org/chapter/hybrid-positioning-smart-phones/67043