

**IMPROVING THE QUALITY AND REDUCE THE COST OF HEALTHCARE
MANAGEMENT USING BLOCKCHAIN****D.Karunamma #1, Madisetty Keerthi #2, Kanta Akshaya #3, Shaik Saleema Begum #4,
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Qis College of Engineering and Technology**Abstract**

In a nutshell, medical records include a wealth of information on individual patients that may be used in diagnosis, care, and investigation. However, confidentiality must be maintained throughout storage and transmission. Given these advantages, blockchain has found widespread use in the administration of medical records. Due to the fact that it is not centralised and is thus resistant to manipulation. This report assesses the growth of blockchain in healthcare from several viewpoints in order to better understand it. Various use cases for blockchain-based solutions are analysed. The three technologies in question are federal education based on the blockchain, the exchange of electronic medical records through the blockchain, and the Internet of Medical Things. Given its immutability and auditability, the findings demonstrate that blockchain and smart contracts are well suited to the storage and distribution of medical records. Finally, the opportunities and threats that blockchain technology presents to the healthcare industry are examined, with the hope that this can propel the sector ahead.

1. Introduction

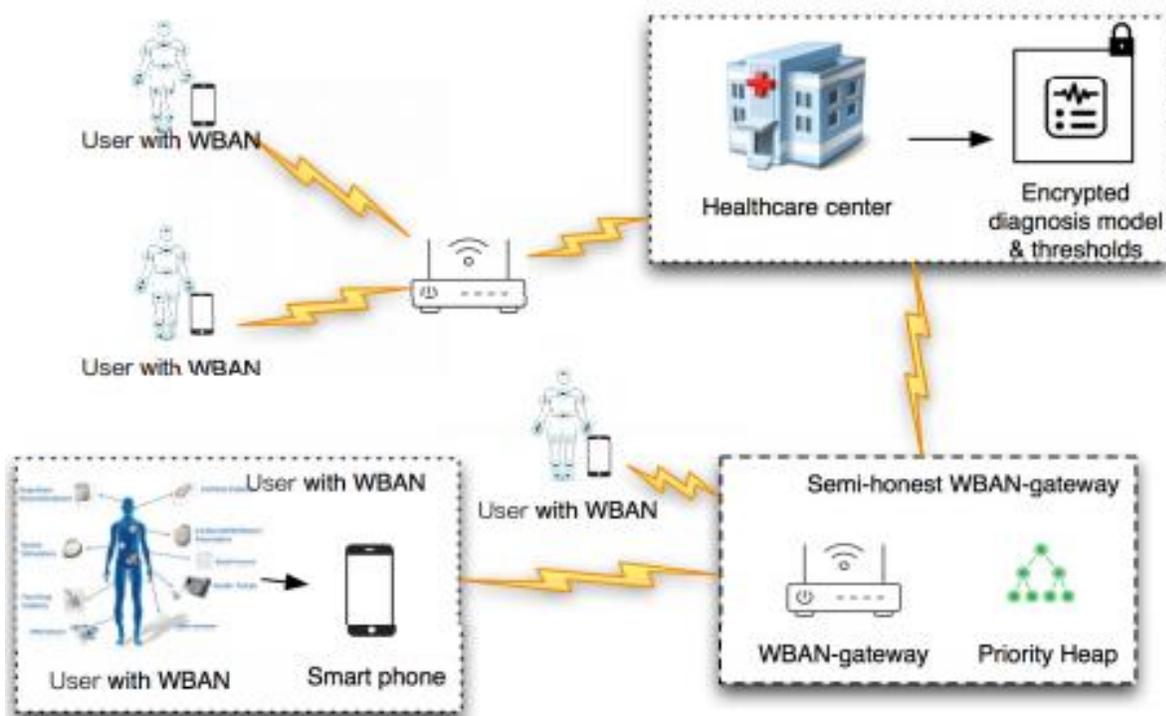
The platform integrates blockchain and isolve's proprietary digital ledger technology. The software gathers health records from several hospitals and research facilities into one central location. Applying blockrx in the real world has led to significant progress.

Several studies have provided overviews of blockchain-based models. The blockchain technology utilised in this model is analysed by Jin et al. [7] in terms of how it affects the privacy of patients exchanging medical information. According to this analysis, there are two primary types of blockchains: permissionless and permissioned. The paper then on to examine the pros and cons of various blockchains.

Xu et al. [12] focus their analysis on how blockchain might be used in cancer data, namely for medication tracking and sharing. The fact that this research solely looks at data related to cancer is a weakness. In this study, we examine blockchain-based approaches to healthcare data sharing, categorising them into three use-cases: blockchain-based healthcare data storage and access; blockchain and the internet of medical things (IOMT); and blockchain-based federal learning.

The differences and similarities between each system are highlighted, and the more conventional cryptography-based data exchange approaches are contrasted.

This article provides a comprehensive overview of the most recent blockchain-based technologies that may be used to store and distribute medical records. This document is arranged as follows moving forward: The first section provides an overview of the relevant literature .we will discuss the fundamentals of blockchain technology we discuss potential use cases for blockchain technology in the context of healthcare data exchange, classifying these use cases into three main groups. In Section 4, we will examine the difficulties and potential of using blockchain for healthcare records. The last portion of the report summarises the findings and draws conclusions.



2. System analysis

While the WBAN remote healthcare system is essential, it does present severe privacy issues due to its reliance on users submitting sensitive physiological data and personal information such as age, name, gender, and medical history. However, the illness models are a valuable asset to the hospital's intellectual property portfolio. No one from the WBAN-gateways or the users will be given access to the healthcare facility's disease models. There is a risk that hackers will find a way into the WBAN-gateways or the users' smartphones and steal private data or intellectual

property from the healthcare facility. Thus, many different proposals for protecting patient confidentiality in telemedicine e-health systems have been made. However, there are still challenges, such as accuracy and efficiency, that need to be addressed in healthcare privacy-protecting methods based on encrypted data.

Disadvantages of Existing System

- Obstacles in the way of privacy and safety.
- Challenges on accuracy
- Constraints on effectiveness

3. Proposed System

Research into the development of secure remote e-Healthcare systems has been conducted in both the context of cloud-based outsourcing and the context of two-way communication between the user and the healthcare facility.

Our research focuses on the usage of relay WBAN-gateways to facilitate interaction between patients and medical facilities.

Due to the urgency and length of time required to process medical packets, WBAN-gateways collect them from a variety of users and forward them on.

The primary components of the system are the healthcare facility, the WBAN-users, and the WBAN-gateways.

Advantages of Proposed System

The suggested PPC method protects user privacy and the confidentiality of the healthcare center's illness models while completing the priority classification and packets relay responsibilities.

Due to the fact that it is a non-interactive process, the associated communication costs are minimal.

The computational and communication overhead of our PPC approach is minimal.

4. Implementation

- Data Holder
- Data Analyzer
- Emergency Sector

- Healthcare Server

Data Holder

As part of this section, the Holder transmits patient information to the Health server. Only one copy of the data is kept by the data owner, and that is the one stored on the server.

Data Analyzer

Here, he enters his username and password to get access. The recipient will do a data search and see medical records after logging in.

Emergency Sector

There are a number of functions available to the industry in this section, including seeing the whole list of published patient information, viewing the complete list of emergency patients, and viewing the total number of emergency patients that have been admitted to the hospital.

Healthcare Server

Health care providers administer a server for the purpose of data storage and may perform actions like viewing and authorising analysts and data holders. See the Age Range of a Patient, Perform a Patient Search, You may check the details of every emergency patient who was admitted, see the results of an age restriction test, and see how many people were admitted.

5. Conclusions

Blockchain's decentralised, auditable, and tamper-proof properties have piqued the attention of the healthcare data industry. In this study, we take a fresh look at blockchain-based medical data exchange and provide our findings. This study provides a brief summary of three possible healthcare data sharing application scenarios and evaluates them in light of more conventional methods. Comparing the blockchain-based paradigm to the standard cryptography-based model . Model is safer and smarter because to the usage of smart contracts. However, there are problems with blockchain technology, such as poor throughput and limited scalability. These factors have stymied the growth of blockchain for exchanging medical records. Sharding, cross-chain, and consensus algorithms are all technologies that will be crucial in the near future.

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