BLOCKCHAIN IN HEALTHCARE AND PHARMA SECTOR

A Quick Summary

CryptoIndexSeries

HEALTHCARE AND PHARMA

Health and government organizations spend a significant amount of time, effort and money to set up and manage patient information systems and data exchanges which requires resources to perform backup and recovery measures, continuously troubleshoot issues, update field parameters and extract information for reporting purposes.

Additionally, vast majority of hospitals still cannot easily (or safely) share their data. Although there exists the notion of individual health data, this has not translated into personalized care plans.

Finally, although there is a plethora of data, the overall healthcare ecosystem is incapable of adequately interpreting the vast amount of data to help better predict future care episodes of patients.

The use of Blockchain Technology will ensure continuous availability and access to real-time data which will improve clinical care coordination and provide industry wide incentives. Providers and organizations will now have access to the same existing data, leading to optimised patient care. Aggregating data from a larger and more diverse patient population enables thorough research activities including clinical trials that can result in a more accurate representation of the general public. Blockchain technology creates a global platform for seamless collaboration and a progressive environment where a patient has full control of their health data and providers work together to ensure the full potential of a patient’s health outcome while reaping the economic benefits of an efficient healthcare system.

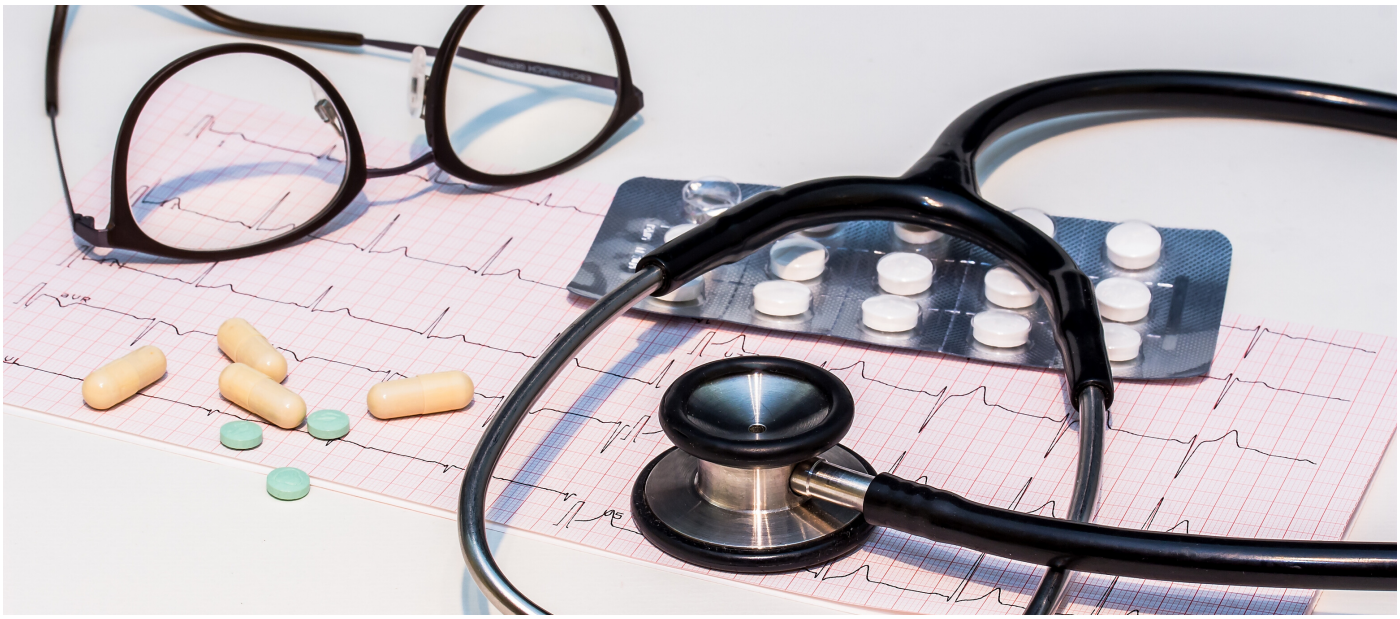
Additionally, there are blockchain solutions to keep genomic data or dental records secure, to hold a reliable database for donors, to provide reliable information to insurance firms, to keep track of own fitness data (weight, blood pressure, glucose, etc.).

Specific areas of interest in Health Sector and how Blockchain Technology will address these areas are summarized below:

- **De-identification** is the process of anonymising Electronic Medical Records (EMRs) by removing certain identifiable information and only providing partial data. This process de-identifies the patient, maintaining a HIPAA compliant environment and providing valuable resources to institutions for better reporting, medication research, and overall patient outcome. Blockchains being immutable, distributed data ledgers do not allow data deletions, however, techniques to anonymise the records are currently under research.

- **Data structures** are the representations of patient data in digital format. A decentralized health information system on a Blockchain would aggregate data from all EMR providers and create a consistent view of patient records across a cohesive data sharing network.

- **Interoperability** is the ability of a system to be able to exchange and use the electronic health information from another system without additional effort externally. Blockchain Technology can also support the interoperability efforts.



Subsectors

Healthcare, Genomics, Dentistry, Health Insurance, Fitness, Pharma

Stakeholders

- **Providers:** Providers are the hospitals and other medical facilities that serve patients and act as the input source for the EMRs.

- **Patients:** Patients are the primary source of data. Though, they do not have the right to write their own data, they are responsible to grant the data access when new requests are created. They can view their data from various providers.

- **Consumers:** Consumers are the health related business organizations which may view partial, anonymous EMR data for mainly research purposes.

Based on the solution provided, other stakeholders can be Doctors, Specialists, Blood Collectors, Insurance Firms, etc.

Asset Type

The type of tokens in this sector are generally utility tokens with exceptions. Depending on the coin, there are different services provided. Examples to these services include, but not limited to, processing all services and data requests for patients, providers, and consumer organizations, validating smart contracts, requesting or providing data permissions, accessing EMRs, etc.

Blockchain

There are a good number of ERC-20 compliant coins in this sector. There are also solutions with their own blockchains.

References

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