

BLOCKCHAIN AND ITS IMPACT IN THE HEALTHCARE INDUSTRY

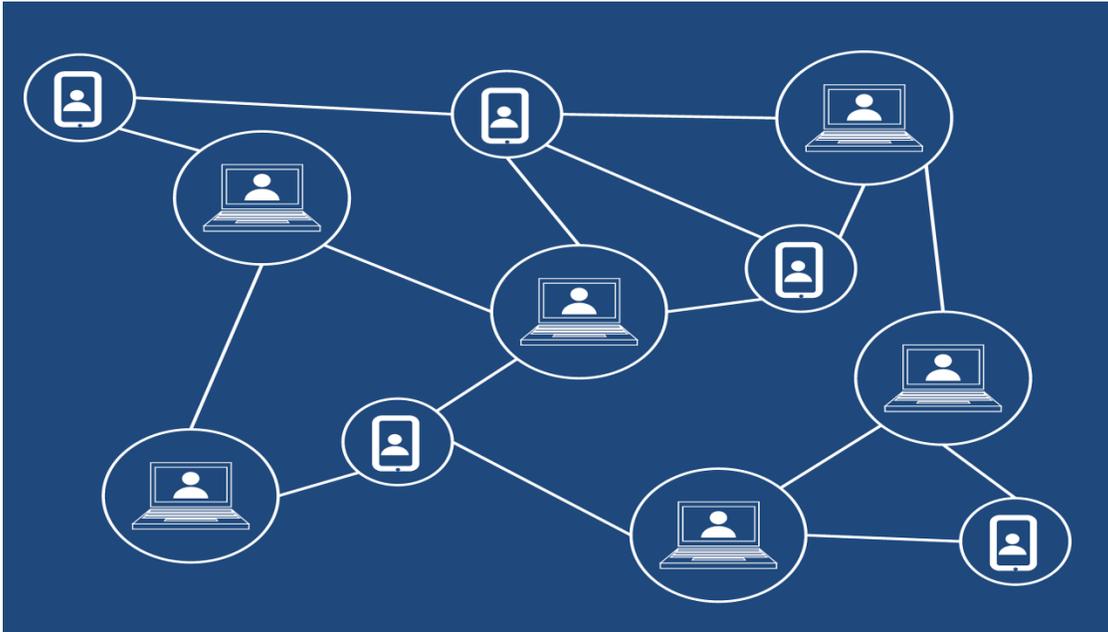


The 21st century is the era of information. It is called so because knowledge rules the world today. As the antagonist of the popular TV series Sherlock Charles Augustus Magnussen rightly put it, “Knowing is owning.” This knowledge is the Ultimate commodity, and the internet is the ultimate marketplace. And Cryptocurrency is the manifestation of Information; Encrypted Information in the form of currency. Bitcoin and its competitors in the field of Cryptocurrency are all encrypted data which are used as currency on the online platform. The value of this currency is not associated with any real-world asset and is fully virtual, based on trust. This trust springs from guarantees of authentication (proof of identity) and authorization (proof of permission). The transfer and trade of Cryptocurrency are conducted online and hence can be recorded and stored. But what most people do not realize that the underlying technology behind the BitCoin phenomenon is Blockchain.

Simply put, Blockchain is an electronic ledger. The function of Blockchain is to be a platform where trade and exchange information can be stored. This trade need not be financial but can be virtually anything of value. The records of the transactions are kept in such a way that it is incorruptible and transparent. The critical features of Blockchain which make it an efficient and trustworthy storage space are as follows.

- The data is stored in a shared database with no central or master copy, which makes it nearly impossible for a hacker to corrupt.
- The data stored is regularly updated and tuned by multiple users.
- This information is public, which means anyone on the internet who has proper credentials can access it.

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These features make it the perfect platform for any kind of record keeping. This is the reason why Blockchain can be relevant any and every sector, be it Business, Logistics, Manufacturing, etc.

Every industry needs some database in which a business can enter, store, edit, and manage the information related to their work. At a later point in time – they can effectively access it from multiple points so that the communication becomes more competent.

But particularly in fields such as Healthcare and Government, where the Public is also is at stake, the addition of Blockchain serves another equally important purpose, which is Transparency. The inherently decentralized nature of the storage process ensures that the Information that is stored in these secure ledger is incorruptible by any one individual or group. It also enforces that the information stored in this network is adequately verified and authenticated. In addition to that, the data is accessible to the public, provided that there are laws in place to govern that, and proper identity confirmation is carried out. This will ensure that anyone can access this information, and whoever obtains this information can verify its authenticity and completeness. What this translates to is that that we can assign different access levels to varying levels of hierarchy. The public, the doctors, the pharmacists and so on can have different kinds of authority regarding access and modification of the data stored.

Blockchain And Healthcare – Impact Analysis

Coming to the use of [Blockchain technology](#) in the Healthcare sector – a new breed of applications is bringing ease of access to information regarding Drugs, Pharmaceuticals, and Medical Procedures to everyone involved, thus bringing transparency throughout the patient care lifecycle. It also includes making collection, organization, revision, and verification of the data easier. By using Blockchain technology, the information regarding Healthcare like Drug sales, Health records of all patients, Details,

and specifications regarding Medical procedures, Hospital log, etc. can be stored in a decentralized Database based on interconnected networks of personal computers. These computers can be used as terminals to access, edit, and update this information, given that they have the proper credentials and authentication.

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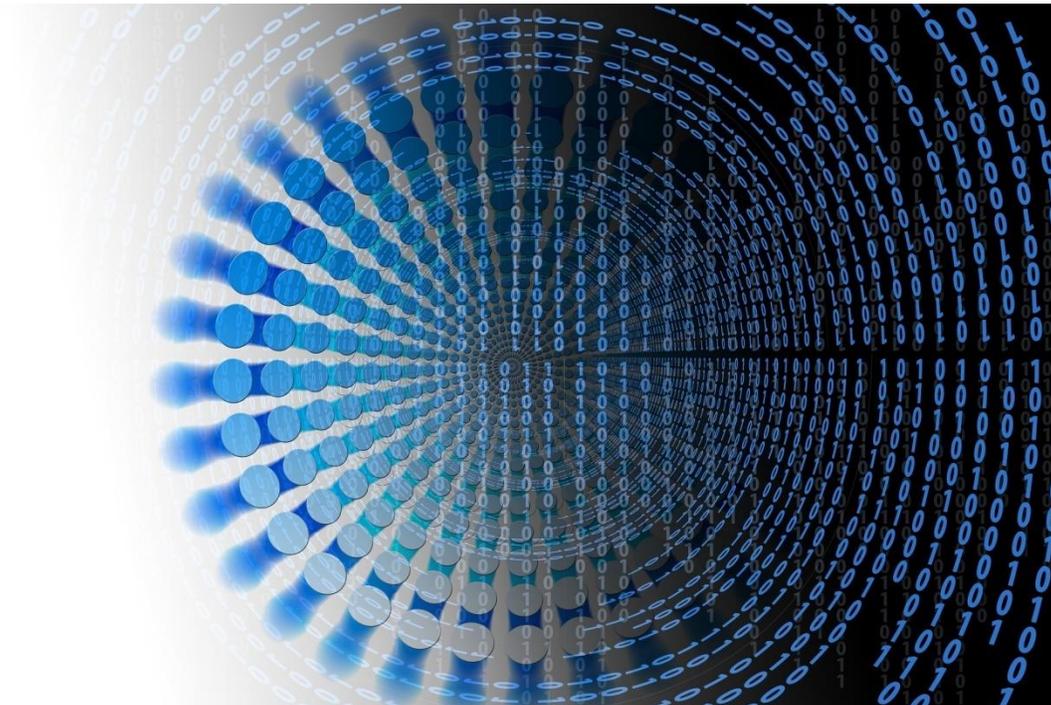
The use of Blockchain in Healthcare industry is already disrupting it. Since it is only in its infancy – it is not hard to stretch your imagination and realize that blockchain will revolutionize how we care for the unhealthy. Currently, a lot of problems prevail in the field of Medicine because of a lack of uniform, a reliable and transparent method for storing and retrieve sensitive information. Issues like illegal drug sales, improper treatment, shady deals between doctors and pharmaceutical companies etc. are a can of worms. And Blockchain can be efficiently used to tackle these dilemmas.

Private health records of a patient could be made available instantly and securely to all doctors in all hospitals, making treatment more accessible, especially in case of emergencies. Information about the patient's demographics, health records, and treatment history is critical to ensure that the best possible care is given to the patient. All these essential workflows will become easy and secure with the use of BlockChain, which grants doctors and other officials with the proper credentials to access, modify and monitor these records.

Drug Tracking, the sales of Drugs and Pharmaceuticals from manufacturers to retailers, is a chain where a lot of problems happen, like illegal drug sales and defective drugs. Using Blockchain to oversee this pathway can help ensure that the drug that is being sold is legal and trustworthy. It also helps to trace a drug back to its sellers and manufacturers in case something goes sideways. The end to end tracking and

auditing ensures accountability. It also ensures that the market doesn't get contaminated with defective goods.

In Research and Development of new medications and medical procedures, the storage and flow of information is an integral step. By using Blockchain instead of conventional means, the data stored can be verified by experts and stored without fear of corruption of this information by any party. This guarantees authenticity in the new products and procedures discovered, as the development of these were wholly transparent and tamper-proof.



The same database can be used for patient-specific medication and genomics. It has been theorized that depending on the genetic makeup and traits, every individual has different specifications and requirements in medicine. The storage and flow of such information can be done using this technology.

What we talked about above are just a few use cases of this fantastic technology. There are many more, like Electronic record keeping, easier access to information for the public, effortless tracking of the Medical Sector by the Government, etc. The possibilities are endless.

The Verdict

Blockchain itself has many advantages as a network for Data Storage and Analysis, as it is a system open to all computers connected to it. Effectively decentralized and super-fast, it is the perfect entity for a ledger. The age of information is upon us. And this system has the potential to act as the Heart and the

Blood Vessels for data to flow. It is a means for effective and continuous communication and data transfer. Blockchain in Healthcare systems will make our lives a lot easier, and there is lots to be conquered.

Source and Reference-

<https://tetranoodle.com/blockchain-impact-healthcare-industry/>

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