

Blockchain: healthcare's next frontier, or so much hype?

June 25, 2018

DataArt's Denis Baranov discusses how blockchain is likely to have a significant impact on the future of healthcare

The current buzz about Blockchain sometimes gives the impression that the technology is going to have a dramatic effect on every industry in the next year. **In fact, Blockchain's potential is much more limited than some seem to believe. However, it is likely to have a significant impact in the mid-term future of healthcare.**

What does Blockchain actually do?

Blockchain solves the problem of trust in complex environments. It makes it possible to develop a decentralized system with a set of rules that are nearly impossible to circumvent.

No one entity produced blockchain – the blockchain technology emerged, along with cryptocurrencies, from the fact that it does not require the participation of a centralised organisation.

How will it impact healthcare?

The most obvious use of **blockchain in healthcare** is to facilitate tracking in the supply chain: pharmaceutical drugs and substances such as narcotics that are subject to special control. This follows naturally because blockchain has been already used in supply management for some time.

Buyers can't currently track where their drugs come from at pharmacies. Counterfeit drug supplies vary from 15% in countries where the government controls the pharmaceutical market, to 80% where it doesn't. Certificates of authenticity go only so far, as unscrupulous suppliers can falsify documents.

A blockchain can store information, from production to arrival at the retail pharmacy, and this functionality could be used to monitor medicines in polyclinics. It can show to whom the drugs were transferred, the quantity, and more.

The system will act as a sort of black box, creating user trust. Information cannot be changed or deleted and this is a huge advantage over a database, in which data can easily be altered.

Patient control

Data transfer between healthcare systems is currently a serious problem.

It is possible to implement a blockchain which hands more control to the patient. The patient could temporarily provide doctors or research organizations access to their data. The application will be absolutely transparent in terms of who used it and how.

This won't happen tomorrow, because such a process requires building a community of users. The process is somewhat comparable to the development of open APIs (applications that collect information and present it in readable format) in the banking system. This is now the standard for all large banks.

The impossibility of hacking the system and deleting data makes it possible to develop this idea.

For example, data can be used by different agencies, for example, the those wishing to verify if a patient is fit for work, but only with the correct consents.

Moving between doctors or healthcare providers, a time when records can get adulterated, would be greatly eased by a blockchain system. This would address issues of faulty memory, non-forthcoming patients or, in the case of serious illness or injury,

speechlessness. Several organisations are in the development stage of solving this problem through the use of blockchain technology.

Why we'll have to wait a bit

In short, the reason for the wait comes down to cost. As healthcare is one of the most regulated sectors, and rightly so, the introduction of any new technology inevitably requires serious financial investment. For clinics to be able to exchange patient data it would be necessary to create a common network, and to provide additional staff training and health facilities with much higher levels of cybersecurity.

The high cost will likely impact the development timeline and it is unlikely that we will see large-scale blockchain driven medical projects implemented over the coming months.

Original article can be found here: <https://www.openaccessgovernment.org/blockchain-healthcares-next-frontier-or-so-much-hype/47013/>