



FAIRCOVER

BLOCKCHAIN FOR EFFICIENT HEALTHCARE BUSINESS

Whitepaper 2.1

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Welcome to the future of blockchain Healthcare platform. FairCOVer is a revolutionary platform where secured data, information availability in real time and crowdfunding has never been more efficient, easy and decentralized before.

With FairCOVer, any individual, company or state establishment will be able to participate, track and contribute in making the worldwide healthcare system more reliable, risk free, and most importantly, fair.

SECURED PATIENT DATA

The powerful data protection program of healthcare goes over compliance!

The security and safety of our medical data is the key factor for protecting both the medical industry, as well as people's privacy. It has been a major issue in the worldwide healthcare system. Between the years 2007 and 2017, the records of over 176 million patients were subject to data breaches. Penetrators stole private information, such as bank & credit card details, health & genomic test records, etc.

The data protection in the industry of healthcare does not represent an easy feat. Healthcare providers and their business partners are required to balance guarding the privacy of the patients while delivering quality patient care and comply with the strict requirements such as HIPAA and EU's GDPR.

Obviously the vast increase of the electronic health record usage urges healthcare risk and data violation. However, this is where blockchain technology becomes the best option for having the distributed ledger technology (DLT) apply to a broad healthcare system. Since it's an incorruptible, decentralized and transparent log of all the information related to patient data. The blockchain technology allows patients, doctors, medical workers and drug developing companies to share information quickly, safely and without any limitations of access.

What is Blockchain and how can it be helpful in providing the bigger opportunities for healthcare?

Blockchain, the great opportunity for healthcare, represents a new model of exchange for healthcare data.

The health data exchange that is powered by the blockchain is able to open the true value of compatibility. Blockchain-based ecosystems have the ability to reduce or even better, eliminate the dissension and expenses of current mediators.

The blockchain promise has extensive consequences for stakeholders in the ecosystem of health care. Taking advantage of this technology has the possibility of connecting the divided structures and systems in order to produce perception and to evaluate the care value better. In the long run, the blockchain network for digital medical records might enhance efficiencies and encourage better health results for patients.

The blockchain ecosystem has the ability and the potential of transforming healthcare, stationing patients in the heart of the healthcare supporting infrastructure and growing the security, safety, privacy, and compatibility of the healthcare data. The ecosystem itself is capable of providing a new pattern for Healthcare Information Exchanges (HIE) by constructing electronic medical records effective, disintermediated and safe. As this is not a “magic bullet” or remedy, this new, fast-growing ecosystem gives us the productive ground for experiments, investment, and research/testing.

Blockchain ecosystem applicability in healthcare

Healthcare is considered to be one of the very fields where blockchain has the greatest potential and ability to develop. Being aware of the applicability of the blockchain in the healthcare industry, in 2016, the ONC (Office of the National Coordinator) structured a conceptual challenge for requesting White Papers on the likely usage of the blockchain technology in the healthcare system. This challenge gained a couple of suggested healthcare applications for the blockchain.

In this part, we concentrate on the most important parts of the research by a couple of use cases: digital medical records, remotely monitored patients, and health insurance claims.

a) Digital Medical Records

In order to change healthcare, the main focus should be assigned to the health data management that might be enhanced by the potential of connecting the heterogeneous systems and improve Digital Health Records (DHRs) exactness.

b) Remote Patient Monitoring

In order to be able to monitor the status of the patient remotely, Remote Patient Monitoring (RPM) includes the medical information collection through mobile devices, sensors of body area and IoT (Internet of Things) gadgets. Thus, the Blockchain ecosystem plays a very important role in saving, storing, sharing and retrieving/reclaiming the biomedical information.

c) Health Insurance Claims

Health Insurance Claims represents one of the very healthcare fields that can take advantage from stability, transparency and verifiability of the blockchain ecosystem.

While Health insurance claim refinement is an important aspect in which the blockchain has the ability of development. You can also take a look at the MIStore, which is a blockchain-based medical insurance system, which is responsible for providing medical insurance systems with encrypted medical insurance information.

We would like to represent the outline of the researched data. Our team has observed and the most part of these applications are developed on famous blockchain frameworks, in particular, Ethereum and Hyperledger Fabric.

Information in real time

At the heart of the blockchain, it is a representation of a delegated system recording and saving the records of the transaction. Specifically, the blockchain is a permanent record/file that relies on cryptographic structure in order to allow the participants to interact without preexisting trust among the parties.

Blockchain decentralized technology allows any type of information to be gathered and shared in real time. Thus, enabling urgent situations, epidemics or pandemics, outbursts of various infections and disease to be discovered, vocalized, acted upon and tracked in approximately 20 times faster than it usually happens.

The use of the blockchain by FairCOVer and organizations

The very first use of the blockchain technology was represented by a Bitcoin (BTC), which is based on the blockchain ecosystem. But, the real-time use and applicability of the blockchain extended way far beyond cryptocurrencies, and the technology appears to, in time, have an effect on many industries.

Below mentioned real-time examples of the blockchain technology in operation:

a) Removal of the middleman

The blockchain technology, nowadays, is used to remove all the middlemen and form a secure and decentralized way for customers in order to get engaged and transact directly, safely and securely.

For example, the world's biggest tourism companies are involving the new ideas about the use of the blockchain as a form to finally substitute travel aggregators like Expedia. The industries are already using private blockchains in order to store its contracts, however determined to shape a public blockchain in which people and staff will have the ability of engaging directly with hotels.

b) HealthCare Improvement

SimplyVital Health organization has started the shaping of two blockchain powered products that are formed to increase management in healthcare. At the first stage, ConnectingCare, tracks the patients' improvement progress

after leaving hospitals and the Second, Health Nexus, is formed to gain fully decentralized blockchain patient data.

Elsewhere, the FairCOVer team is in collaboration with the Center for Disease Control (CDC) in order to create a Blockchain system for saving and storing disease outbreak information/data, hoping, improvement the efficiency of disaster relief.

c) Effectiveness in the Insurance World

Nationwide insurance company is forming and testing a blockchain solution called RiskBlock, which will be responsible for providing and gathering proof-of-insurance data. This aims to help and improve law enforcement and insurers get the insurance coverage verified in real time, also make the submission process quicker and more effective.

Blockchain-enabled smart contracts also have the potential to revolutionize insurance claims by ensuring only valid claims are paid out. For example, the blockchain would know instantly whether multiple claims have been filed for the same accident. And when conditions have been met for a satisfactory claim, payment could be triggered automatically, without any human intervention, drastically speeding up the resolution of claims.

Clearly, blockchain technology is still in its infancy, and has a long way to go before it can be considered even close to mainstream. Yet these examples show how industries are beginning to wake up to its advantages, and, as the technology matures, we can expect to see even more companies investing in blockchains.

Formation of the FairCOVer future with the blockchain

FairCOVer generates unique abilities and opportunities in order to lower and reduce intricacy, facilitate trustless cooperation, and create secured and unalterable data. HHS is a way of tracking this quickly growing field in order to detect trends and the areas where the support from the government might be necessary to understand the full potential of the technology in real time. In order to form the future of the blockchain, mapping and functionality of the ecosystem shall be formed by HHS, in addition, establish a framework for the blockchain system to organize and support alliances for discussion and research.

Worldwide crowdfunding

FairCOVer will offer a revolutionary platform for crowdfunding, solving existing flaws in the system. Companies, NGOs, governments and individuals, angel investors and anyone else will be able to fund the projects, development of various drugs/vaccines using Blockchain and smart contracts. Hence, global healthcare will be more fair, efficient and most importantly, decentralized, serving the interests of all, versus those of only a small group of countries or monopolistic companies.

Our members identified four most important economic benefits of health-care crowdfunding:

- Market participation expansion,
- Growing funding accessibilities for each and every individuals and SMEs,
- Drawing realization and support to rejected issues,
- Growing social engagement

The Crowdfunding platform's usage to cover healthcare expenses is increasing rapidly within low, middle and high-earning countries as a new funding method in global health. The productivity of such "medical crowdfunding" is boosted by health disparities and gaps in medical coverage and social safety systems. In its current forms, Crowdfunding could be understood as an antithesis to universal health coverage. However, the study on medical crowdfunding, in particular, in global health conditions, has been unusual and gathering important data is difficult.

To map and officialize how medical crowdfunding is formed, this article gives an explorative, theoretical and practical examination of medical crowdfunding platforms around the world. The information is adapted from mixed-method examination of medial crowdfunding operation, as well as a current ethnographic research of crowdfunding platforms and the people who use them.

Money laundering and fraudulent activity risks

Online crowdfunding leaves supporters sensitive to fraud because “old school” legal and reputational security actions might not work. In history, there have been a couple of cases aimed against “crowdfunders” who illegally and fraudulently gathered and claimed donations for a state of health they did not have.

Furthermore, promoters, in most of the cases, do not have the same motivation to secure their name, reputation and goodwill because they stay anonymous and often one-off players.

Also, there seems to be some potential risk for money laundering, which could easily support drug deals, terrorism and other illegal activities. Both of them, money laundering and fraud appear to be not that often and do not substantially discourage individuals from taking a part in crowdfunding.

Nevertheless, governments are working to further develop anti-money laundering and anti-fraud protection methods.

BENEFITS OF FairCOVer

a) Early detection of epidemics

Detecting any epidemic in its early stage is vital to global healthcare that carries huge importance for not only developing the proper drugs, treatments and vaccines, but for governments to also ensure the healthy livelihood of their countries. The latter is the direct contributor to economic stability and growth. Without controlling and preventing outbursts of pandemics, it would be impossible to maintain healthy social and economic balance among populations. By far, one of the greatest pandemic that has hit the economy hard, has been COVID-19, which shows that besides early detection, there are a number of actions to be taken, in order to avoid the collapse of relatively weaker economies.

b) Fast tracking drug trials

Any drug or vaccine development usually takes several years. Of course, along with the enhanced technology capabilities and information flow, the time frame has decreased to 2-3 years. Nevertheless, the fast tracking of the process still comes with a lot of flaws that causes unnecessary delays in carrying out research to the scale that can speed up the whole process. Hence, fast tracking drug trials, and acting upon them in a timely manner, is utterly important for developing different types of drugs or vaccines. The most recent example of COVID-19 vaccine development shows us that world's scientists and doctors united their interests, both scientific, medical and of course commercial, in order to develop and approve a vaccine within 1 year. It is still unclear what kind of impact it will have, since this was an artificially accelerated process out of a desperate need for a solution. This underlines the importance of a flawless

system that will actually accelerate the process worldwide for all healthcare products. This is where Scalable Blockchain comes in a game, providing a rock solid, proven technology for drug developing companies, investors and treasuries of different countries to operate as a unified entity on a common platform that delivers fast and immediate solutions to the existing issues worldwide.

c) Impact Management

It is obvious that impact caused by any type of epidemic or pandemic, can be significantly reduced by the Impact Management structure that plays the key role in dealing with a situation at hand. Lots of examples have shown that delayed actions or lack of flawless technology has caused management to be ineffective. With the help of blockchain and FairCOVer platform, the exchange of information and funding will be immediate, contributing to swift handling of matters and fifteen times faster solution generation.

CURRENT FLAWS IN THE SYSTEM

a) Weak worldwide systems

Current pandemic has shown that despite the swift response from scientists and medical workers, the worldwide system still comes with a lot of flaws that has and will create problems such as fairness of distribution, speed and complexity of cooperation among health organizations, drug developing companies and governments of different countries. Besides that, there are also issues relating to tracking the progress among the huge world population, different limitations and bureaucracy, misinformation, conspiracy theories and so on.

b) Limitations on accessing tools

Even if solutions are developed, the implementation process becomes quite hard due to commercial interests of monopolistic companies and/or big players on the international market. This may cause a lot of other companies and countries not to have access to solutions until the space opens up for them with the heavy interference of small groups of people.

c) Misinformation (leads to more chaos and contributes to scam)

With the rapid growth of social and mass media, people are exposed to a lot more information, than even 5 years ago. Thus, the risks of spreading misinformation, conspiracy theories and lies, contribute to social chaos and panic. That's why, the importance of a decentralized platform that provides proof checked information in real time, has never been more vital.

People are fighting the Pandemic.

Now it is time to eliminate the “Infodemic”

- The COVID-19 pandemic led to a lot of inappropriate reporting and misinformation.
- Lack of digital intelligence and limited internet accessibility has aggravated the situation.
- The proper and correct information is the key to accountability and better governance.

The process creates active feedback loops, which are crucial in fighting the pandemic: FairCOVer team gathers data from our community networks and social network; basic research, facts eligibility and close the loop by packaging appropriate and correct data and spreading it widely while working with locals and officials to solve problems.

First of all, getting correct information and access to the data is the most important aspect of the people's ability to push for accountability. Big amounts of money are getting assigned for COVID-19 alleviation purposes over the world, and it is crucial that the locals realize what promises they hear and what services they will be able to get access to.

Second, FairCOVer team has built and formed big trust with the communities in which we have worked almost over the past decade, and at a time when people are turning to trustworthy guidance sources, we find ourselves in a situation to encourage and support a better and enhanced realization of the pandemic. As we know and understand, dynamic communication between people and government can strengthen trust.

And the last, this effort shapes a platform for more productive and responsive governance which will be a big supporter of social contract between citizens and governments, and guarantee we are prepared for the pandemic in the future. For instance, in Nepal, the FairCOVer team is in collaboration with nineteen local and city governments in order to shape this feedback procedure into their decisions. Meanwhile in Pakistan brochures are used to educate and inform the work of a number of large NGOs and programmers powered by the government. The more responsive the organizations become, the better they have effectiveness.

At the same time, when misinformation and misunderstanding both are highly hazardous, we all have to be responsible for fighting the “infodemic”. Combating misinformation could be compared to wearing a mask. It represents a small act that guards people, and it can save lives. We can each do our bit by combating, reporting misinformation on social platforms and broadcasting proper information in our social group when we see fake news being broadcasted. Ultimately, this pandemic will be over, however “infodemic” are way harder to eliminate.