The purpose of this document is to explain:

What CoinHealth is
Roadblocks in Healthcare
Project Objectives
Understanding Blockchain Solutions
Waves Wallet Exchange
Wearables and Mobile Platform
Hope’s Seed
Executive Summary

Problem Summary
The current state of healthcare in America is fractured, expensive, inaccessible, and attributing to worse health of our populous. America is not alone in this healthcare crisis, but summing healthcare up in one problem statement is impossible and would underscore the severity of the worlds current health crisis.

For a reasonable understanding of how many people lack access to essential health services, one must look at few areas of concern to include cost, spending disbunds, available services, accessibility, mortality rates, technologies, stability in region and many other factors relevant to health and its complexities per nation.

"The World Health Organization (WHO) reports that over 400 million people currently are lacking access to one of seven essential services for Millenium Development Goals."

CoinHealth can apply blockchain solutions to many of the problems and common factors that attribute to the consistent rise in the cost of healthcare. Addressing accessibility, reduction of third party arbiters, administrative cost, drug costs, insurance premiums, faulty treatment mixes, limited investments, fractured data platform communication, regulations and government.

Solution Summary
Blockchain maintains as immutable ledger and “smart contracts” that can surely securely and efficiently accommodate the recording and storing of all revenue life cycle events.

- Be a consumer P2P payment method
- Verify patient identification
- Verify and facilitate insurance payments and reimbursements
- Process prescriptive orders as well as interface with electronic health records (EHR)

CoinHealth’s functionality as a savings and investment platform is only the initial stages of the project. Utility of CoinHealth as the organization grows we will be a continuous effort. E.g. incorporating wearable biometric response apps linked with the CoinHealth rewards program.

Maximizing utility, ease of access, offering innovative applications for integration into healthcare, CoinHealth platform / exchange, savings and payment solutions, will be the early project focus. Efforts to integrate products and services with electronic health record platforms will be strategically approached to allow for research and development and product optimization to align with funding resources. Through direct reduction of intermediary parties CoinHealth immediately begins to reduce cost of healthcare, as the community grows and utilizes the services and platform and the utility of the token increases while the supply decreases leads to financial models of valuation growth of the token.
Executive Summary

Biometric Market Insights
The global mobile application market is growing at a rapid pace. With the growing adoption of smartphones and increasing download of mobile applications, Sports and fitness apps are used by millions of mobile users daily. These apps guide users to maintain a healthy lifestyle and fitness regime by tracking their running distances and monitoring their heart rates and other biometric data.

The global biometrics technology market size was valued at USD 10.41 billion in 2015. It records unique human characteristics, such as the retina, fingerprints, DNA, and voice patterns, for authorization.

This technique aids in avoiding security breaches and frauds in comparison to the traditional methods such as the use of passwords. The biometrics technology system uses a reader, related software, provides a high degree of accuracy and security due to unique characteristics of individual physical features. No two of us are exactly the same in any way.

The increasing concerns over internal and external securities are expected to drive the industry to innovative use of biometrics, additionally, the increasing use of the technology in government and private sectors for identification and authentication is expected to drive the overall demand over the coming 20 years. Technological advancements, such as blockchain technology integration and multimodal biometrics technology, are expected to provide new opportunities for industry growth in healthcare.

Application Insights
Biometrics technology is widely used for applications including face recognition, voice recognition, signature recognition, hand geometry, iris, Automated Fingerprint Identification System (AFIS), and non-AFIS. Fingerprint scanning is the most widely used biometric authentication technique. Contactless biometric techniques, such as palm print and hand vein biometrics recognition is expected to witness considerable growth over in coming years. Automated Fingerprint Identification System (AFIS) is expected to be a dominant application segment. Its primary contribution is expected to come from the private sector through the background check of employees. Biometric technology, Iris-based identity recognition, palm scanners and access controls are expected to become integral parts of the healthcare industry for authentication of patient and provider credentials. If a patient enters a hospital in an unconscious state, their identity could be verified and authenticated with a palm scanner linked to CoinHealth biometrics, giving the hospital and attending doctors access to the patient’s vital information about conditions, disease, pharmaceutical interactions, current state of health, surgical procedures, and any vital medical data to the patient’s care.

End-Use Insights
Blockchain and biometrics will be used to counter issues such as identity theft. The healthcare sector is expected to grow significantly, rapid technological advancements and use of biometrics for protecting patient privacy, curb false insurance claims, and other healthcare frauds will be an integral part of medical data security and renewing trust in the patient provider healthcare experience.
Executive Summary

Preventative Care and Access from Center from Disease Control
Opportunities for prevention impact all Americans, regardless of age, income, or perceived health status. Each year, potentially preventable chronic diseases (e.g., heart disease, cancer, diabetes) are responsible for millions of premature deaths among Americans. Leading causes of death in the U.S. are heart disease, cancer, chronic lower respiratory disease, stroke, and unintentional injuries. Because health problems impact productivity, health problems are a major drain on the economy, resulting in 69 million workers reporting missed days due to illness each year. This loss of productivity reduces economic output by $260 billion per year.

Most Americans underuse preventive services, individuals experiencing social, economic, or environmental disadvantages are even less likely to use these services. Examples of obstacles include lack of access to quality and affordable health care, lack of access to healthy food choices, unsafe environments, and a lack of educational and employment opportunities.

Preventing disease is key to improving America’s health and keeping rising health costs under control. When we invest in prevention, the benefits are broadly shared. Children grow up in communities, homes, and families that nurture their healthy development, and adults are productive and healthy, both inside and outside the workplace. Businesses benefit because a healthier workforce reduces long term health care costs and increases stability and productivity. Furthermore, communities that offer a healthy, productive, stable workforce can be more attractive places for families to live and for businesses to locate. Further discussion of these benefits is available in the National Prevention Strategy at Prevention & Getting Care.
Executive Summary

The Bottom Line for Consumers
Eliminating cost-sharing (e.g., deductibles, co-insurance, or copayments) for certain preventive services increases the likelihood that preventive services will be used. The government is making strides to broaden private health plan access to recommended preventive services with no cost or low cost-sharing.

“Preventing disease before it starts is critical to helping people live longer, healthier lives and keeping health care costs down. Preventive services can also help those with early stages of disease keep from getting sicker.” CDC.gov

Health problems are a major drain on the economy, resulting in 69 million workers reporting missed days due to illness each year, and reducing economic output by $250 billion per year. Increasing the use of proven preventive services can encourage greater workplace productivity. Fitness apps are being highly accepted in the fitness market but can also be used for medical applications. These apps gather data, which can be transformed into essential and useful information such as heart rate variations over a given period of time for the user. Fitness apps are being largely used and accepted by athletes because they have proven to enhance the performance by monitoring individual performance and analyzing the weaknesses of the individual. The average moderately active person takes around 7,500 steps a day. Average life expectancy is 80 years of age; you’ll have walked about 216,262,500 steps in your lifetime. Doing the math, the average person with the average stride living until 80 will walk around 110,000 miles in their lifetime.

Example of Biometric Wearable Rewards Model Based on Previous data:
Earning 2 CoinHealth per mile for 110,000 miles * .05 = $11,000, with no appreciation in value of token from day 1 of Presale.  
110,000 * .35 = $38,500 on Day 1 of Crowdfund.  
110,000 * .95 = $104,500 in a life time at the .95 ending price of the ICO. Who wouldn’t want an additional $104,500 in a lifetime?

If the token value in this model were to go to $5.00 * 110,000 miles = $550,000 in a life time. This example is a model for representational purposes and only factors in physical exertion, not retail rewards in CoinHealth awarded for health-related purchases and are not an exact representation of earned rewards of Coinhealth tokens.
Markets of Opportunity

The markets that CoinHealth will operate and conduct business in, is a blend of three markets to include, Finance, Healthcare, and Technology. CoinHealth begins as a simple value exchange token from inception, and grows to be the lifeblood of the healthcare community through steady development, innovation and application.

- **Technology**
  - Wearables
  - Biometrics
  - Handheld Devices
  - Dapp
  - Incentive: better health an e.g. Pedometer that pays CoinHealth to your Lark fund for miles ran.

- **Healthcare**
  - EHR
  - EMR Medical Records
  - Verifications
  - Data Security
  - Licensure
  - Prescriptive
  - Faster transactions
  - Better health

- **Finance**
  - LARK FUND
  - P2P
  - Payment Solutions
  - Exchanges
  - Healthcare Currency
  - Access
  - Incentivized financial and physical health

- **Rewards**
  - CoinHealth Rewards Program, linked to Apps with biometric health feedback indicators. Awarding CoinHealth for healthier living

- **Hope's Seed**
  - Philanthropy and Charity
  - Offshoot program of CoinHealth LLC
Healthcare Technology and Finance Market

Healthcare Market – Healthcare IT or Healthcare Information technology has emerged as a promising development to transform the paper-based healthcare system into digitized healthcare system, ensuring effective patient safety and care standards. Health information technology (HIT) is the field of IT involving the design, development, creation, use and maintenance of information systems for the healthcare industry. Part of HIT is the global mobile Health solutions market, which is projected to reach USD 90.49 Billion by 2022 from USD 21.17 Billion in 2017, at a CAGR of 33.7%. The growth of the mobile health solutions market can be attributed to the factors such as the growing demand for healthcare applications, the advent of advanced connectivity and network technologies, robust penetration of 3G and 4G networks to provide uninterrupted healthcare services, and rising focus on patient-centric healthcare. As well as a demand for higher levels of security and data sharing applications. This information indicates that the healthcare community is looking for a solution that are cost effective and suitable to the rigors and demands of the healthcare industry.

Technology Market - Principal components of the Healthcare IT market are software, hardware and services. Commonly used Healthcare IT solutions by Healthcare Providers include electronic medical records, computerized physician order entry, electronic prescribing, clinical decision support, picture archiving and communication systems and more. The non-clinical information system includes application such as payroll, automatic patient billing, claim management, revenue cycle management, cost accounting others. Spending on US Health care IT alone comes in at at whopping 40 Billion annually alone. Additionally, payer Healthcare IT solutions include pharmacy audit and analysis, claims management, customer relationship management, fraud detection, billing, payroll, general ledger and others. There is an enormous need for technology integration with EMR an EHR systems that can move patient information across the continuum of care and place caregivers back in the position to focus on patients. This is done through delivery of technological solutions that eliminate financial and administrative burdens currently strapping healthcare.

Finance Market – CoinHealth is positioned to initially act as a flexible spending health savings account and investment. CoinHealths Lark is a Lifetime Accessible Retirement and Savings, Kinetic account tethered to the CoinHealth rewards program that awards Coin-Health for health-related activity, purchases and expenses using mobile iOS and Android applications (Biometric wearables and handheld devices). Approaching the HSA market was strategically based on market growth and available capital as well as untapped target populous. Current year over year growth of the HSA markets points to financial opportunity for CoinHealth to enter this space due to available capital and growth. Capturing just 1% of the 17% growth inertia in this space the first year would be substantial and lead to successful CoinHealth Lark fund establishment.
Wearables, Mobile and Online Platform

Mobile iOS and Android platform applications with wearables and biometric feedback linked to the CoinHealth rewards program will pay individuals’ LARK fund.

The CoinHealth app will pay CoinHealth reward for health-related expenses purchases and activities. E.g. Pedometer app that pays CoinHealth for miles jogged, or linked to retail health location purchases as cash back or CoinHealth back reward to the CoinHealth Lark account for health-related expenses.

Decentralized Reward Model

Connects user to financial incentives for preventative health and activity.

Personal control of health and wealth.

Financial rewards system incentivizing healthy living.

Decentralization, Autonomous, Payments into LARK Account

Target customers cross section from all three markets – Physicians and Healthcare Providers / Executives, Millennials, Technology Entrepreneurs, Cryptocurrency Experts, Enthusiasts and Investors. Health and Fitness community, Believers of application of blockchain technology in healthcare, American, Asian and European online and social media Markets.

Project Objectives

Initial objectives of this project will be to gain early adopter and sufficient physician, healthcare provider and network support to fund stages of development of token, platform, exchange and creation of LARK fund. Their contributions will be vital in supporting the developmental stages CoinHealth is planning to undergo during the project. Physician and healthcare provider acceptance or support is critical to the adoption and employment of the strategy. Physician and provider acceptance allows the concept of the products to integrate into healthcare facilities, after proven success at an individual level as an investment vehicle and peer-to-peer payment solution, these participants are the lifeblood of the health facilities they are employed by.

Engaging the technologically savvy millennial generation and empowering their financial future and accessibility to affordable healthcare by providing access and flexibility across mobile platforms. (e.g. iOS, Android) Wearables with biometric feedback will be incorporated into platform and the rewards program for healthy activity.

CoinHealth savings and investment token, platform, exchange and community will introduce a new approach to healthcare savings and flexible spending accounts in a mobile, secure online platform through Ethereum based blockchain and Distributed Immutable Ledger with "smart contract" technology. To engage early adopters, healthcare professional and millennials employing initial marketing strategies, research shows that the digital currency market can reach a cross section of all three groups. We will focus on solving key issues important to each group concerning ease of use, accessibility, functionality, security, ROI, rules and regulations, fees and issues that cause institutional avoidance and make traditional health investments less appealing to an online generation. Millennials are investing in crypto currency as a form of both long-term and short-term investments, they provide flexibility and liquidity in an ever-growing blockchain environment. They haven't abandoned institutionalized and traditional investing but they have started using crypto currency as a complimentary asset to their portfolios' diversification. They are exploring a new market that they see as extremely viable, with endless application, value and growth.

Payments solutions for healthcare related expenses will be rewarded with CoinHealth tokens to any ERC-20 Ethereum wallet or CoinHealth wallet incorporated into the CoinHealth platform.
Project Objectives

Blockchain Technology and Applications - CoinHealth

As stated by Christian Cantini (MIT) and Joshua Gens (University of Toronto) ‘We identify two key costs that are affected by distributed ledger technology’ A) the cost of verification; and B) the cost of networking. Markets facilitate the voluntary exchange of goods and services between buyers and sellers. For an exchange to be executed, key attributes of a transaction need to be verified by the parties involved at multiple points in time. Blockchain technology, by allowing market participants to perform costless verification, lowers the costs of auditing transaction information, and allows new marketplaces to emerge. Furthermore, when a distributed ledger is combined with a native cryptographic token e.g. (Bitcoin, Ethereum, Lite coin) marketplaces can be bootstrapped without the need of traditional trusted intermediaries, lowering the cost of networking. This challenges existing revenue models and 19 incumbents’ market power, and opens opportunities for innovative approaches to regulation, auctions and the provision of public goods, software, identity and reputation systems.

Use of exact citation was essential as applying economic theory and its correlation to innovation and contention of traditional incumbents to market power would be best be illustrated with exact words of the author. The previous citation illustrates the possibility of cost lessening with implementation of blockchain technology, by eliminating arbiters currently involved in revenue and data devolution models currently implemented in healthcare.

The Bottom Line for Consumers, states the CDC, Center for Disease Control

- Problem - (Barrier to Healthcare Access) Cost-sharing (e.g., deductibles, coinsurance, or copayments) for preventive services decrease the probability that preventive services will be used. The government has promoted to broaden private health plan access to recommended preventive services with no cost or low cost-sharing. (CDC, 2017)

- Solution - Eliminating cost-sharing, reduction of arbiters and other intermediaries that elevate expenditure in daily operational business and administrative transactions attributing to cost sharing charge distend, must be drastically reduced or eliminated. CoinHealth, is based on Ethereum based blockchain with smart contracts. Contracts have state and functions. Two functions to distinguish between are read only (constant) and transactional functions.
  - Read only – Can read state but do not perform state changes. Read only functions can be resolved locally by individual nodes and are costless ‘no gas’ when providing values, and exacting computations.
  - Transactional – Perform state changes within a contract and transactional financial assets by sending transaction to the Ethereum Virtual Machine (EVM) engaging all nodes in the system. ‘Gas’ in basic explanation is a minimal fee for the computational resources required to perform the operations of the contract (for miners). Transactional function executions require ‘gas’. M. Currently median averages for Gas(Gwei) / USD, per transfer are $0.13, with low cost transfers being $0.018. (Ethgasstation, Sept. 26, 2017) Each gas unit must be paid for in Ether coming from the contract sender’s Ethereum wallet.
Project Objectives

- **Healthcare Applicability** - Smart contracts enable machine to machine network communication in a secure environment to transfer information. Medical documentation, invoices, patient records and financial data can be sent and received without costly layers of intermediaries and arbiters involved. Which streamlines processes, reduces or eliminates cost and fees, eliminates human element of unsavory or malicious actors, malicious actors who could access patient critical data for profit exchange, decreasing risk of security breach during transaction.

- **CoinHealth** - Implement platform for verifications of intra facility patient records and information as well as development of innovative smart contracts that functionally fill the needs specific to healthcare related transactions, verifications, privacy and security regulations (e.g., HIPPA) for the greater healthcare community network. Security and privacy in healthcare is paramount, current HIPAA privacy rules establish national standards to protect individuals’ medical records and other personal and sensitive health information. HIPPA regulatory compliance applies to health plans, health care clearinghouses, and those health care providers and facilities that conduct certain health care related transactions electronically. (Secretary O.H., F.O., 2017)

- **Problem** - Currently the Healthcare industry has been the recipient of countless hacking and data theft attacks, in the first six months of 2015 more than a million records were compromised causing operational, financial, and reputational damage to healthcare industry organizations. (IBM, 2017)

- **Solution** - Blockchain technology can stop disbursement through leakage and theft of secured information by allowing sending and receiving participants to authenticate transaction attributes to enforce smart contracts. This can be done without revealing the primary information within the contract to any third-party.

- **Healthcare Applicability** - Providing a secure delivery method of medical records and data. Utilizing decentralized immutable ledger, distributed autonomous computation allows no one single point of attack during a transaction. Potential conflicts in the execution of contracts due to attacks or failures for example are resolved through a consensus protocol based on “proof-of-work”. Contracts can only be executed appropriately if the human element involved correctly interprets the terms and conditions they are agreeing to. Which proposes a problem for implementation into healthcare? If there isn’t autonomous arbitration for contracts in event of dispute of contract terms, a decentralized judgment system needs to be put in place. Legal eventualities are inevitable in competing markets and costly when traditionally resolved. (Kaminska, 2016) Judgement or court systems will become increasingly more important when applied to healthcare due to the varied nature in which patient data is recorded from facility to facility. A court system could provide resolve to dispute on patient medical records to be resolved to accuracy.
### Solution

**CoinHealth** - Develop and promote a platform that aligns the incentives for mining to provide an environment resistant to financial collusion, by unsavory participants and consortium actors. Develop or partner with a (DApps) adjudication platform to resolve human dispute terms not fulfilled or comprehended during T&C agreement, that obstruct contract authentication.

Historical data breaches in healthcare have primarily entered systems through third party vendors or arbitrators. (IBM, 2017) Implementation of blockchain eliminates the need for third party arbitrators, thus increasing security for the healthcare industry. (Elimination of weak link) Pseudonymity of blockchain technology and account addresses, applied to healthcare further reduces the threat of security breach from inside actors, by securing patient information without directly exposing their information or name to any third parties. Implementation of blockchain technologies

**Security**
- Would enable patients not to have gather their own records from multiple providers to send to a new specialist.
Coinhealth's Solution

With blockchain, the new specialist would simply be appended to the patients record on the chain. Introducing the protocol relegated to appending blocks 'Proof of Stake'.

- **Makes 51% attack harder:** 51% attack happens when a group of miners gain more than 50% of the world’s hashing power. Using proof of stake negates this attack.

- **Malicious-free validators:** Any validator who has their funds locked up in the blockchain would make sure that they are not adding any wrong or malicious blocks to the chain, because that would mean their entire stake invested would be taken away from them.

- **Block creation:** Makes the creation of newer blocks and the entire process faster. (More on this in the next section).

- **Scalability:** Possibly making the blockchain scalable by introducing the concept of 'sharding' or other methods of maximizing scalability currently being discussed, such as block size increases and Scalability will be a focus throughout the project.

Use Case for Utilization of Blockchain Technology:
Patient Record Verification and Physician Data Sharing, EHR, EMR Integration
Who owns medical records of patients anyhow, I came to find that, state to state, regulatory compliance varies. Some states have governance ruled by the court and I also found that many states do not have any such statutes, yet even in states that were absent of these statutes, ownership under common law even where and when no statute or regulation (e.g., McGarry v. J.A. Mercier Co., 272 Mich. 501, 262 N.W. 296 (1935) (Michigan case holding that x-ray negatives were the property of the physician who made them, not the patient); Holtkamp Trucking Co. v. David J. Fletcher, M.D., L.L.C., 402 Ill. App. 3d 1109, 932 N.E.2d 34 (2010) (Illinois case holding that medical records were physician's property). Specific laws addressing how providers must care for and manage, guard, and destroy records and laws allowing WHO is allowed access e.g., patients, providers, and others who access the medical records, regardless of ownership status. Patients in all states have many protections regarding their medical records, under the HIPAA Privacy and Security Rules. "With limited exceptions, the HIPAA Privacy Rule (the Privacy Rule) provides individuals with a legal, enforceable right to see and receive copies upon request of the information in their medical and other health records maintained by their health care providers and health plans".

Based on fore-mentioned legal findings. The constructs for implementation exist today, for the application of blockchain technology. Physicians can access patient record in STATE, (Read Only) Permanent Ledger. As well as to be able to add a new record. Blockchain is a distributed ledger that can record transactions between two parties efficiently in a permanent and verified way. "Smart Contracts" Can be written to govern and autonomously carry out the transactions. These transactions are embedded in digital code where they are secure and cannot be deleted.
Coinhealth's Solution

Sharing data in the medical field has proven to be a daunting task, but one thing that has held consistent is that physicians have rights as do patients when it comes to sharing medical records and data and the transference, review and ownership of those records is expressed through a unique relationship that they have together and should be free of arbiters that could compromise that data. A doctor has a special relationship with his patient. (See Cannel v. Medical and Surgical Clinic, S.C. (1974), 21 Ill. App.3d 383, 315 N.E.2d 278.) This relationship not only vests the doctor with the responsibility of disclosure, but also requires the doctor to exercise discretion in prudently disclosing information in accordance with the patient's best interests.

Trilliant Risk Advisors Chief Business Officer Susanna Tisa, said “To mitigate this risk, companies should compile a comprehensive inventory of and conduct data and privacy risk assessments for all third-party vendors; however, we found that few companies represented in this research, in particular those outside the regulated banking sector, have done so.” To conduct the massive overhaul of traditional healthcare record systems in the way Susanna mentions here, would cost billions to the healthcare industry. An example of the cost you ask? In a lengthy report, the IOM wrote that U.S. medicine wastes roughly $750 billion per year. The current state of healthcare systems has physicians, and healthcare providers, along with their patients, left with a vexing array of fragmented systems, making providers of all specialties unable to exchange critical information about prescriptions, patient conditions and diagnoses, radiology imagery and lifesaving procedures.

Blockchain technology offers a multifaceted solution. Access, security a dynamic of programmability, the blockchain ledger is open source and distributed, keeping no one piece of the record in any one place. The end user has very little change to incur to adopt using blockchain, because most technologies are adaptable, with careful planning and application of the functionality, that is easy to learn, use and teach for the end user as well as can dramatically lower costs per transaction and enhance security by using blockchain to track the flows of currency within accounts without relying on external payment processors. [7] Anytime a physician record or patient record is transacted between facilities including third party arbiter a cost is incurred. all the people and hours weeks and months worked that paperwork goes back and forth and sits in fed-ex packages in mail store rooms exposed to possible compromise of critical information, that is required to be transacted securely.

Congress enacted HITECH the Health Information Technology for Economic and Clinical Health Act on February 17, 2009. The fundamental purpose of HITECH is to encourage investment in health information technology, and the act specifically authorized administrative incentive programs to improve quality of care, patient safety, and healthcare efficiency through new adoption of technology. The technology that can save millions if not billions in wasted spending annually is Blockchain technology with immutable ledger and smart contracts where the functions set within the smart contracts have parameters that can be instantly verified across a secure distributed ledger 24 hour a day.
Coinhealth’s Solution

Example: Physician crisis. General Surgeon (A) flight was delayed and cannot get back to OR by tomorrow for procedures and General Surgeon (B) is at a conference and cannot come back because he is out of state and procedures are for tomorrow morning at 8:00am. Administration knows of General Surgeon (C) that is not privileged, credentialed with the facility. Yet is reputable, proficient licensed and skilled. With blockchain technology general Surgeon (C) could immediately be notified of an available procedure and send his Surgical Credentials file stored on the distributed ledger to the facility of need, which could be accepted autonomously if General Surgeon (C) met all the criteria of the ‘Smart Contract’ deployed by the facility to the network of providers within feasible range to conduct the needed procedure. Upon smart contract authorization that General Surgeon (C) verifiably meets the standard of the smart contract, then autonomously the patient is notified of a new available provider that has expressed terms, bio and credentials standard in any pre-op or physician consultation, or historical record of performance before surgery. The patient then has the decision to accept the terms of the smart contract or decline and wait for their provider to return. As I mentioned earlier the relationship lies in the patient and provider/physician trust mechanism, so there is a decision of choosing a governance construct to the smart contract solution. I will talk about this in the technology section.

This can all be done within minutes with responsive parties. Currently this scenario could take months for the provider to be able to acquire the privileges to have patient contact. Why does it take so long? Physicians and health care providers are asked to produce countless copies of their records on a consistent basis derived from a fractured system of records keeping nationwide. Every new facility a provider works in, has a demand of 2-7 months of archaic paper pushing and pulling for the physician or provider to ever see a patient. Blockchain technology can be applied to do verifications and transfer much of this data for many of the processes of the privileging and credentialing process, resulting in faster, more secure verifications and privileging. Allowing provider to begin work in a new facility and do what it is they want to be spending their time on, caring for patients.

What is blockchain and how can a smart contract do that?
Blockchain produces “one version of truth” that cannot be easily meddled with and is constantly being distributed across the network to all nodes. The ledger has suitable constraints for generating a reliable and verifiable evidence about data sets or process, or even an environment. This makes many types of interactions in a peer 2 peer or peer 2 business safe to occur without third-party oversight so that extraneous costs of intermediaries become nonexistent.

Problem 1- (Barrier to Healthcare Access) Cost-sharing (e.g., deductibles, co-insurance, or copayments) for preventive services decrease the probability that preventive services will be used. The government has promoted to broaden private health plan access to recommended preventive services with no cost or low-cost sharing. (11) I need to preface how economics comes into the governance system of how a smart contract is executed, when there is discrepancy between providers about accuracy of records or practices. (More on this later)

Blockchain Solution - Eliminates cost-sharing mechanisms, reduction of arbiters and other intermediaries that elevate expenditure in daily operational business and administrative transactions attributing to cost sharing ascension (must be drastically reduced or eliminated)
Coinhealth’s Solution

Blockchain with smart contracts - Contracts have state and functions. Two functions to distinguish between are read only (constant) and transactional functions.

- Read only – Can read state but do not perform state changes. Read only functions can be resolved locally by individual nodes and are costless ‘no gas’ when providing values, and exacting computations. (Can hold physician and patient records in a read only format) This can be added to but not changed.

- USE: Patient and provider immutable file that is recoverable for review instantly. Can be send and received. (Accessed securely by the sender and receiver) direct P2P payment source linked to rewards program for CoinHealth rewards payout to CoinHealth Lark fund.

- Transactional – Perform state changes within a contract and transact financial assets by sending transactions to the Ethereum Virtual Machine (EVM) engaging all nodes in the system. ‘Gas’ in basic explanation is a minimal fee for the computational resources required to perform the operations of the contract (for miners). Miners are the decentralized equally untrusted nodes processing the transactions. (Equally untrusted is a statement that defines miner economic competition for one another to accurately process transactions for gain of digital financial reward)

- Transactional function executions require ‘gas’ to change and interact with the contract. Contracts notarize and proof, to authenticate the transaction and make the state change of the EVM. Currently median averages for Gas(Gwei) / USD, per transfer are $0.13, with low cost transfers being $0.018.

Each gas unit must be paid for in Ether coming from the contract sender’s Ethereum wallet.

Healthcare Applicability - Smart contracts enable machine to machine network communication in a secure environment to transfer information. Medical documentation, invoices, patient records and financial data can be sent and received without costly layers of intermediaries and arbiters involved. Which streamlines processes, reduces or eliminates cost and fees, eliminates human element of unsavory or malicious actors. Malicious actors who could access patient critical data for profit exchange, as well as decrease the risk of security breach during transaction.

CoinHealth – Develop blockchain that’s adaptable to address key issues. While incorporating current open source code and innovating new applications and implementing platforms (Mobile and Desktop) for verifications of external and intra facility patient records and information as well as development of innovative smart contracts, that functionally fit the needs specific to healthcare related transactions, verifications, privacy and security regulations (e.g., HIPPA) for the greater healthcare community network.
Coinhealth’s Solution

Security

Security and privacy in healthcare is paramount, current HIPAA privacy rules establish national standards to protect individuals’ medical records and other personal and sensitive health information. HIPAA regulatory compliance applies to health plans, health care clearinghouses, and those health care providers and facilities that conduct certain health care related transactions electronically.

Problem 2- Currently the Healthcare industry has been the recipient of countless hacking and data theft attacks, in the first six months of 2015 more than a million records were compromised causing operational, financial, and reputational damage to healthcare industry organizations.

Solution- Blockchain technology can stop disbursement through leakage and theft of secured information by allowing sending and receiving participants to authenticate transaction attributes to enforce smart contracts. This can be done without revealing the primary information within the contract to any third-party.

Healthcare Applicability- Providing a secure delivery method of medical records and data. Utilizing decentralized immutable ledger, distributed autonomous computation allows no one single point of attack during a transaction. Potential conflicts in the execution of contracts due to attacks or failures for example are resolved through a consensus protocol based on “proof-of-work”. Contracts can only be executed appropriately if the human element involved correctly interprets the terms and conditions they are agreeing to. Which proposes a problem for implementation into healthcare? If there isn’t autonomous arbitration for contracts in event of dispute of contract terms, a decentralized judgment system needs to be put in place. Judgement, governance or court systems will become increasingly more important when applied to healthcare due to the varied nature in which patient data is recorded from facility to facility. A court system could provide resolve to dispute on patient medical records to be resolved to accuracy. There has been promising work done on governance or courts systems by other companies such as the work done by the Aragon Group, not in the health care space, but what they are doing could be reworked for healthcare.

Develop and promote a platform that aligns the incentives for mining to provide an environment resistant to financial collusion, by unsavory participants and consortium actors. Develop or partner with a (Dapps) adjudication platform to resolve human dispute terms not fulfilled or comprehended during T&C agreement, that obstruct contract authentication. Historical data breaches in healthcare have primarily entered systems through third party vendors or arbitrators. Implementation of blockchain eliminates the need for third party arbitrators, thus increasing security for the healthcare industry. (Elimination of weak link) Pseudonymity of blockchain technology and account addresses, applied to healthcare further reduces the threat of security breach from inside actors, by securing patient information without directly exposing their information or name to any third parties. Implementation of blockchain technologies would enable patients not to have gather their own records from multiple providers to send to a new specialist. With blockchain, the new specialist would simply be appended to the patients record on the chain.
Coinhealth’s Solution

Introducing the protocol relegated to appending blocks “Proof of Stake”:

Advantages of proof of stake - Lowers overall monetary cost: “Proof of Stake” – Miners get rewarded in Ether by validating and appending blocks to the chain by staking claim (betting), in ether. If the block is appended the miner is rewarded.

- Using “Proof-of-stake” the whole process completely becomes virtual eliminating costs.
- ASIC advantage: None the process will be virtual, it wouldn’t depend on who has the better ASICs equipment (application specific integrated circuit).

Economics of Proof of Stake

Decentralized mining nodes are invested in validation the contracts information due to their “stake” financial bet to verify the contracts information and append it to the blockchain. If they do not they lose their “stake” all together. They are motivated to securely and accurately validate the contract in equal competition with other nodes by means of financial mining reward. The information cannot be added to the state unless validated.

Key Benefits of Physician and Patient use of Blockchain

- Ease of Access, Instant data transfer and verification, physician can go to work faster, SECURE
- Time savings for complex, multi-entity interactions reduced from weeks or months to minutes. Transaction are instant, because it doesn’t require verification of a central body or multiple central bodies checking the same information independently and repetitously, and then compiling data to transfer through email or mail exposing it to compromise.
- Cost savings with blockchain reduces expenses in numerous ways:
- Extraneous oversight is not needed because the network is self-policed by network participants and contracts set with functional parameters to execute upon validation of prescribed information, all of whom are known on the network and interacting directly.
- Intermediaries and arbiters are reduced by participants exchanging items of value directly whether it be financial or documents.
- Duplication of effort is eliminated because all participants have access to the open source shared ledger that permanently recorded in a state of

Pseudonymity. Eliminating lost records, downtime to find them, or risk of physical damage or theft of them.

Other Applications: IMLS – Records Integration – Interstate medical Licensure Compact - State to State Licensure Reciprocity – Instant Prescription validation and issuance, radiology reads, scheduling and confirmation, billing credentialing file transfer and validation. (another lengthy process that needs to be engaged and overhauled)
CoinHealth's Solution

Current Model Vs. Blockchain Model

Upper: Current model on top, lengthy, has multiple intermediaries and resistance points, exposed to risk. Provider cannot go to work quickly.

Lower: Blockchain model on bottom, instant, cost effective, safe and secure, decentralized, resistant to breach or information leakage, control over records, patient-physician privileged records management relationship, eliminates intermediaries. With the CoinHealth Multi Sig Wallet, you have everything in one wallet.
The CoinHealth ecosystem will be securely integrated with exchange, mining, financial and healthcare ecosystems. By design the cyclic and continual exchange, transference and finite amount of the token, increased utility, development of innovative applications, early adopter acceptance as well as piggybacking in a business space with current kinetic energy, are all factors that will enable the success of CoinHealth.
**PRE SALE / EARLY INVESTOR ROUNDS (55,000,000)**
- Coinhealth tokens are available on Waves DEX and on PayPal through 72-day token sale event.
- The minimum cap set at 6,000,000 tokens allocated has been met.
- The sale will begin on 12/10/17 at a price of $0.05 and will increase by $0.01 per day for the next 25 days until the 4th of January 2018, at a max price of $0.29.
- All sales will be held in escrow until required minimum allocation goal is met
- The crowdsale will be hosted at www.coinhealth.io

**CROWDSALE (200,000,000)**
Crowdsale begins on 21st of February 2018 at $0.35 and will continue for 60 days with the sales process of Coinhealth tokens increasing by $0.01 per day for 60 days or until the 21st of April 2018 at a final sales price of $0.95 per token. All participants can buy through the Waves Platform or using our secured Paypal portal on the website’s landing page.

All unsold tokens can be burned or reserved for mining or rewards through decentralized apps.

All funds from both Presale and Crowdsale will be used in relation to our allocation chart, with a majority of funds going towards overall organizational growth, product research and platform development.

**SECOND RELEASE (75,000,000)**
Date to be determined. We will announce all the ways in how tokens can be used on exchanges, mining and rewards on decentralized apps through our social media accounts.

**INSTITUTIONAL VENDOR & INVESTOR RESERVE (50,000,000)**
Email us at contact@coinhealth.io
**Token Distribution**

- **Crowdsale**: 200,000,000 (40%)
- **Coinhealth Reserve**: 100,000,000 (20%)
- **Evolve Growth**: 20,000,000 (4%)
- **Vendor or Institutional Investor Reserve**: 50,000,000 (10%)
- **Presale**: 55,000,000 (11%)
- **Second Release**: 75,000,000 (15%)

**Token Allocation**

- **Tokens available to the public**: 76%
  - **Presale**: 55,000,000
  - **Vendor or Institutional Investor**: 50,000,000
  - **Crowdsale**: 200,000,000
  - **Second Release**: 75,000,000
- **Total of 380 million tokens available to public**: 76%
- **Company Reserved**: 24%
Purchasing CoinHealth Tokens

- Presale
- Early Investor Sales of ICO

https://waveswallet.io/
Waves Wallet

COINHEALTH ICO ON WAVES LITE PLATFORM

STEP 01.

- If you have an account already just login and search Coinhealth. Be advised of the exact spelling of Coinhealth.
- Coinhealth Asset ID: GGuigYJDe3xqomr4mGpLAguoEU6CfTjb9qwk3YLCWRc
- If you do not have an account please click new account and begin to register.

Once you have read the above account notice you will click (I Understand). This will take you to the screen where you record your seed phrase. It will be a random group of words in the top square box. Save this! Coinhealth is not responsible for any lost seed phrases, as they are yours and encrypt your personal account for you to control.

This screen is very important!! please read and save your seed in a safe place

STEP 02.
Waves Wallet

Once you have saved your seed phrase, you will fill out the rest of the information, NAME, and PASSWORD, AND REPEAT PASSWORD. You will see your address, an encrypted code where it says address, you may copy this but you do not have to, you will have access to it later. Proceed by clicking register.

**STEP 03.** The image above, under Register Account is where you will see your seed. Copy this down and save it.

**Congratulations you’ve created your Waves Wallet to participate in the Coinhealth ICO**

<table>
<thead>
<tr>
<th>ADDRESS</th>
<th>NAME</th>
<th>AMOUNT</th>
<th>EQUIV</th>
<th>OPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>0x12345678901234567890123456789012345678901234567890</td>
<td>John Doe</td>
<td>0.0000001</td>
<td>0.1</td>
<td>Approve</td>
</tr>
<tr>
<td>0xabcdef012345678901234567890123456789012345678901234567890</td>
<td>Jane Smith</td>
<td>0.0000002</td>
<td>0.2</td>
<td>Approve</td>
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<tr>
<td>0x7890123456789012345678901234567890123456789012345678901234567890</td>
<td>Mike Johnson</td>
<td>0.0000003</td>
<td>0.3</td>
<td>Approve</td>
</tr>
</tbody>
</table>

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Waves Wallet

If you click on the suitcase icon, you can view all assets in your wallet. You can see there is 0.0019 Bitcoin in this account. This is where you will find your Coinhealth when purchased.

Once you receive Coinhealth, you will find it in the wallet described in the previous slide. The only asset identifier of Coinhealth on the WAVES platform is:

GGUvy1Ds3q9zm14mQpLAgueBUteCfoTb9qkw3YLCWRC - Coinhealth Asset ID
This is the WAVES DEX Exchange that Coinhealth will be traded on, it will be instantly tradeable to all major currencies found in your wallet. Founders will not be aloud to sell more that 25% of their holding until after year one. This example Of trade Coinhealth / Bitcoin on the DEX. Be sure to check the asset identifier to assure you are buying Coinhealth GGuigYJDs3x0qmr4mGpLAguoEU6CfqTjb9qwkJ3YLCWRc
In Conclusion
Coinhealth is a token, payment platform and rewards program that is built on Blockchain technology. It enables its clients to spend tokens on healthcare-related resources, whether they be retail, clinical, insurance or preventive care items and visits. Syncing the token platform and rewards model to biometric decentralized applications and mobile devices allows the client or participant to effectively mine Coinhealth tokens while they crawl, walk or run throughout their life. This process catalyzes a cyclic, and never ending movement and circulation of the token. It also catalyzes and incentivizes participants to live a healthier lifestyle for financial gains. In short, you pay yourself by being healthy.

Coinhealth intends not only to have health and fitness related applications, but medical applications for patient identification, authentication devices, whether they be retinal scanners, or palm scanners. Blood banks now use fingerprint scanning to identify donors. Apple's fingerprint scanning technology, built into the iPhone 5S, could eventually put biometrics in the hands of more healthcare providers. Nearly three quarters of physicians use smartphones on the job.

Yet for the most part, 99% of the technology being used today is still authenticated with usernames and passwords. With the state of patient and provider medical record security at the worst it has ever been, nearly 5 million records have been maliciously breached in 2016 alone. Now comes a time to change how we access and control our medical information. Blockchain technology provides the medium to increase security, make transactions faster and eliminate redundant procedures and third party trusted centralization of patient and provider medical records and financial data.

Coinhealth presents an extraordinary opportunity to bring to healthcare an essential tool for the measuring of human characteristics, improvement of patient-based outcomes and the reduction of acute illness.
Please read this section carefully

YOU SHOULD CONSULT YOUR LEGAL, FINANCIAL, TAX, OR OTHER PROFESSIONAL ADVISOR BEFORE

TAKING ANY ACTION REGARDING THIS TOKEN SALE

Participation in a token sale can be highly speculative and could involve a risk of loss. Prospective token purchasers should not construe this Website or White Paper, or any disclosures or disclaimers contained therein as a source of legal or tax advice. The White Paper currently contains a fair summary of CoinHealth LLC’s vision and the operation and utility of its token, and is subject to changes as the matters or relevant importance evolve. Further, this Website or White Paper does not constitute the offering of a security.

We have consulted and continue to work with legal counsel to assess the possible regulatory treatment by the United States Securities and Exchange Commission considering the developing regulatory guidance. Presently, the primary method for determining whether an instrument should be characterized as a security under United States securities laws was promulgated by the United States Supreme Court in SEC v. W.J.何way, 328 U.S. 293 (1946), providing for what has become known as a Howey test. According to the Howey test, an instrument is a security if the following four factors are satisfied:

1. an investment of money,
2. in common enterprise,
3. with an expectation of profits,
4. solely from the efforts of others.

The SEC did not take the position as to whether virtual currencies, or interests in such currencies, are themselves securities, instead indicating that it will apply the same framework that the SEC and courts have applied thus far. On July 25, 2017, the SEC Division of Enforcement issued an investigative report involving tokens issued by the DAO, a virtual organization. The biggest takeaway from this investigative report is that tokens that function like investment contracts under the Howey test will be treated as securities. Although the courts in the United States have not yet directly applied the Howey test to any digital currency or blockchain token, CoinHealth LLC and its counsel have conducted an analysis under the Howey test, and continue to do so, with the conclusion that, likely, CoinHealth does not pose a significant risk of implicating federal securities laws. Considering this, and absent any contrary conclusions or findings, CoinHealth tokens have not and will not be registered or filed under the securities laws or regulations of the United States.

Notwithstanding the conducted research, analysis, and due diligence, the regulatory status of cryptographic tokens, digital assets and blockchain technology is a young industry, varies significantly among jurisdictions, and is thus subject to significant uncertainty. Due to this uncertainty and the general nature of the rapidly changing regulatory landscape, there is always a risk that CoinHealth tokens may not be exempt from securities registration requirements in the United States. CoinHealth LLC’s representations and securities assessments are not a guarantee that the SEC or any other regulatory authority will not determine the tokens to be securities subject to registration. It is possible that certain jurisdictions, whether state or federal, domestic or foreign, may adopt laws, regulations, policies or rules affecting the Ethereum network, through which CoinHealth operates, or restricting the right to acquire, own, hold, sell, convert, trade, or use CoinHealth tokens. To reiterate in a briefer form, developments in laws, regulations, policies or rules may alter the nature of the operation of the blockchain network upon which the CoinHealth tokens are dependent.

CoinHealth tokens have not been approved or disapproved by the United States Securities and Exchange Commission, any state’s securities commission or any other regulatory authority. Should CoinHealth tokens be deemed securities by the SEC or another regulatory authority, CoinHealth LLC and participants in the CoinHealth token sale may be subject to penalties absent proper registration. All statements, estimates and financial information contained in this website, made in any press releases or in any place accessible by the public and oral statements that may be made by CoinHealth LLC that are not statements of historical fact, constitute “forward-looking statements” as defined by the Private Securities Litigation Reform Act of 1995. This includes, but is not limited to, the future revenues, earnings, strategies, and prospects of CoinHealth LLC’s. All statements that are not purely historical constitute forward-looking statements.

Such forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially from those anticipated. Moreover, such statements are based on CoinHealth LLC’s beliefs as well as assumptions made based on information currently available to it. The following non-exclusive list of words, when used within this Website or White Paper, and variations thereof are intended to identify forward-looking statements: “anticipate”, “believe”, “estimate”, “expect”, “intend”, “should”, or “project.” Readers are cautioned not to place undue reliance on these forward-looking statements in making any decision.
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