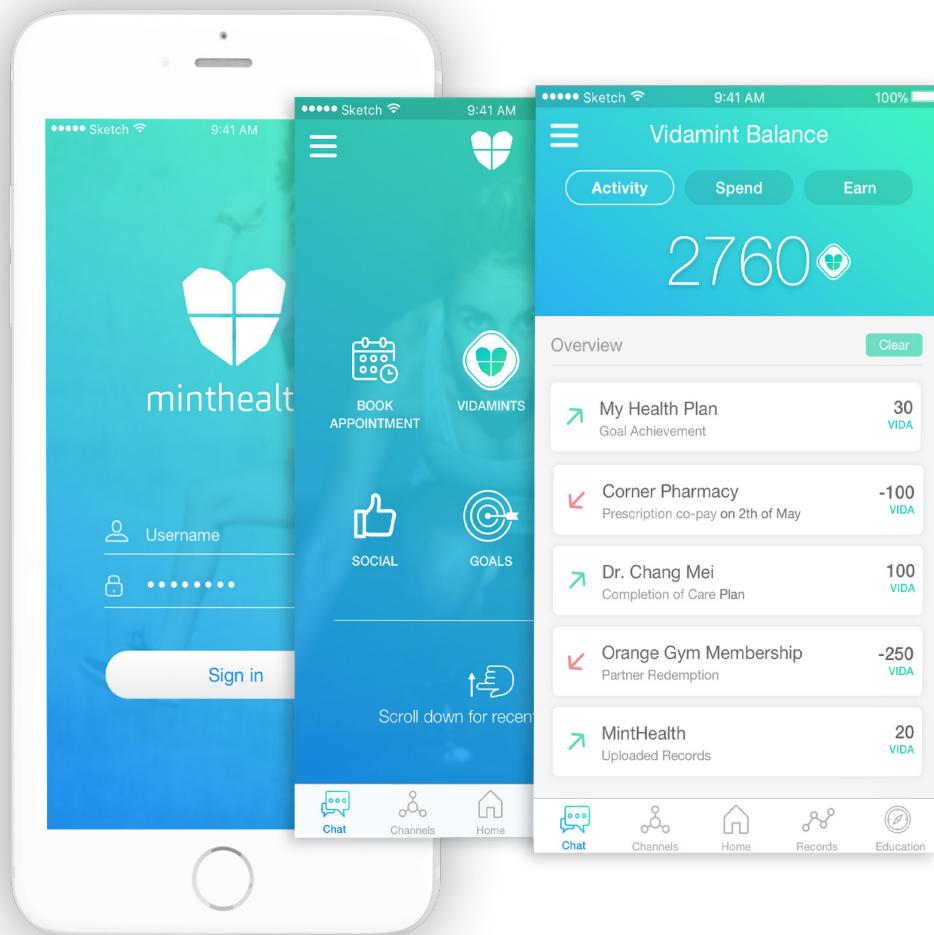


Aligning Stakeholders in a **NEW** **HEALTHCARE** **ECOSYSTEM**



Version 1.0, 11/28/17. Subject to change.

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LEGAL NOTICES

You should carefully read and fully understand this whitepaper and any updates, including the disclaimer and healthcare legal and regulatory considerations provided at the end. Additional risks are described in other documentation provided by MintHealth, Inc., which all potential purchasers should carefully read and fully understand prior to purchasing tokens because they will be legally bound.

This whitepaper describes our current vision for the MintHealth platform. While we intend to attempt to realize this vision, please recognize that it is dependent on quite a number of factors and subject to quite a number of risks. It is entirely possible that the MintHealth platform will never be implemented or adopted, or that only a portion of our vision will be realized. We do not guarantee, represent or warrant any of the statements in this whitepaper, because they are based on our current beliefs, expectations and assumptions, about which there can be no assurance due to various anticipated and unanticipated events that may occur.

Please know that we plan to work hard in seeking to achieve the vision laid out in this white paper, but that you cannot rely on any of it coming true. Blockchain, cryptocurrencies and other aspects of our technology and these markets are in their infancy and will be subject to many challenges, competition and a changing environment. We will try to update our community as things grow and change, but undertake no obligation to do so.



ABSTRACT

Preventable diseases such as diabetes, cardiovascular disease, and cancer are responsible for over 40 of the 56 million annual deaths worldwide (*7 out of every 10 deaths*). Our medical communities spend vast resources battling complications of these behavioral-related conditions, despite having technologies to better engage patients when disease burden is low and the ability to prevent disease is high. Most importantly, clinical and behavioral information is locked within data silos, unavailable to patients, clinicians, and researchers in ways that can leverage machine learning to personalize care and illuminate the drivers of disease and health. Because of these factors, patients have taken a passive rather than a proactive position in their own healthcare.

The result has been an unsustainable rise in global healthcare costs and poor clinical outcomes, which are major contributors to poverty and economic stagnation in the developing world. Developed nations now also face imminent threats to financial solvency. In the U.S. alone, healthcare costs will rise to over \$5 trillion (*over 20% of GDP*) by 2022, with over 90% of these costs related to chronic conditions.

Blockchain technology helps solve for existing healthcare challenges by enabling a self-sovereign, secure, and freely flowing health record. MintHealth will combine the self-sovereign record with a proven patient engagement platform, and a Vidamint token that incentivizes healthy behaviors. This approach to data liquidity and patient empowerment will move us into an era where clinical experience, patient data, and machine learning are leveraged synergistically to create novel insights, therapies, and services for stimulating patient engagement, improving clinical outcomes, and controlling the inexorable rise of chronic disease related healthcare costs.

**“He who has health, has hope;
and he who has hope, has everything.”**
– Thomas Carlyle

1	21ST CENTURY HEALTH	
	A WORLDWIDE CRISIS WITH A BLOCKCHAIN-ENABLED SOLUTION	5
1.1	HEALTHCARE DATA – THE LINK TO RISK & OPPORTUNITY	5
1.2	U.S. HEALTHCARE – THE PERFECT STORM	8
1.2.1	Aligning Healthcare Stakeholders	8
1.2.2	Growing Focus on Value-Based Care	9
2	THE VIDAMINT SOLUTION	10
3	THE VIDAMINTECOSYSTEM	12
3.1	VIDAMINT MODEL, ECOSYSTEM ADOPTION, & PARTNERSHIP INTEGRATION	12
3.2	FOUNDATIONAL ECOSYSTEM PARTNERS	14
3.3	MINTHEALTH, INC.	15
3.4	MINTHEALTH TRUST	15
3.5	MINTHEALTH PLATFORM AND THE SCIENCE OF PATIENT ENGAGEMENT	15
4	MINTHEALTH ARCHITECTURE	19
4.1	MINTHEALTH PLATFORM	19
4.2	PARTNER INTEGRATIONS	21
4.3	SECURITY & HIPAA COMPLIANCE	22
5	TOKEN MECHANISM	23
5.1	DELIVERING INCENTIVES FOR HEALTHY PATIENT BEHAVIORS	23
5.2	INITIALIZING PATIENT SELF-SOVEREIGN HEALTH IDENTITY AND RECORD	27
5.3	COMPENSATING PROVIDER ADMINISTRATION	27
5.4	POWERING ECOSYSTEM REDEMPTION	29
5.5	ENABLING PATIENT DATA GOVERNANCE & VOTING	30
6	TOKEN RELEASE	31
6.1	TOKEN GENERATION EVENT	32
6.2	TIME-LOCKED TOKENS	32
6.3	PRE-MINE EVENT	33
6.4	MARKET SEEDING TOKENS	33
6.5	BOUNTIES	33
6.5.1	Reporting Security Issues	34
6.6	USE OF PROCEEDS – BUDGET ALLOCATION	34
7	ROADMAP	36
7.1	PHASE I: CORE ECOSYSTEM CREATION – KEY CAPABILITIES	36
7.2	PHASE II: PROVIDER IDENTITY AND INCORPORATION OF MIPS	37
7.3	PHASE III: VIRTUOUS CYCLE FOR HEALTH DATA	38
8	TEAM	38
8.1	FOUNDERS & BOARD OF DIRECTORS	38
8.2	EXECUTIVE MANAGEMENT & TEAM	39
8.3	COLLABORATION PARTNERS & TECHNICAL TEAM	40
8.4	ADVISORS	40

1 21st Century Health – A Worldwide Crisis with a Blockchain-Enabled Solution

Chronic medical conditions represent the global public health challenge of the 21st century. Heart disease, diabetes, stroke, cancer, and chronic respiratory conditions represent 70% of deaths, with over half occurring in women and those under the age of 70.^{1,2} This preventable epidemic has been underappreciated as a cause of poverty and economic stagnation in developing nations. Today, 4 of 5 chronic disease deaths occur in low and middle-income countries, and in densely populated areas³. Those of modest socioeconomic means and poor education have been hit the hardest. Nearly \$800 billion of economic output has been foregone in India and China due to premature deaths from heart disease, stroke, and diabetes over the last decade.³ This figure would increase to well over \$1 trillion with the addition of preventable cancer deaths.

The World Health Organization (*WHO*) recently gave an example of Roberto Severino Campos, a 52 year-old living in a shanty town in Sao Paulo, Brazil.³ He ignored his high blood pressure, smoked, and drank excessively. Roberto had his first stroke at the age of 46 and is now completely dependent on his wife and family for activities of daily living. While his medication checks are free of charge, the family doesn't have the money to take the bus to get to the local medical facility. He has since had several additional strokes. Sadly, case studies like this are rampant in urban settings in both developed and developing nations across the globe.

Solutions now exist for Roberto and others like him. Statistics show that 40% of all cancers and 80% of heart disease, diabetes, and stroke are preventable.^{1,4} Common risk factors that can be readily modified including poor diet, low physical activity, sedentary behaviors, tobacco, and alcohol use represent the lion's share of risk for developing and dying from chronic conditions.³⁻⁶ Most importantly, hundreds of studies have shown that digital interventions to reduce risky behaviors, including education, self-monitoring of behaviors, and social support can be highly effective at preventing the development of chronic conditions.⁵⁻⁸ Simple text messaging and health coaching via digital modalities have had significant impacts on improving medication adherence and overall health outcomes in patients like Mr. Campos.^{5,6,9}

Herein, we describe how a self-sovereign health record secured by blockchain allows patient data – clinical and behavioral – to move seamlessly between patients, Providers, and health systems in real time. We also outline how our patient engagement technology and Vidamints incentivize proactive and preventative patient behaviors, thereby precluding the patient passivity that feeds the root cause of the global epidemic of chronic diseases that we face today.

1.1 Healthcare Data – The Link to Risk & Opportunity

Patient medical records are frequently captive to a single Provider or health system, with cumbersome access protocols making it difficult for patients and families to obtain and transfer records across multiple Providers. Furthermore, each electronic health record (*EHR*) stores data differently, so it is not obvious who recorded what, where, and when. This results in EHR data that is essentially walled off from participants in the continuum of care including not only patients whose data it is, but caregivers, pharmacists, nurses, nursing homes, rehab facilities, social networks, devoted to their care. Because of this, lab, medication, and other data frequently need to be faxed and medical images “burned” onto anachronistic CDs and DVDs, hand delivered to Providers that practice outside of the “designated” health system. Legacy software systems with limited interoperability house siloed data scattered

across disparate clinical, research, administrative, and financial systems. Clinical and behavioral data generated from the home and work are absent, and important health trends rarely addressed with the patient. The result is a vicious cycle of an uninformed, passive patient who waits until illness is upon him or her before taking action, if given permission to do so by the “system”.

We see blockchain as the solution for moving patients towards a more informed, proactive approach to their health. Blockchains (**Figure 1**) can underpin the secure housing and immediate transfer of data to ecosystem participants without the need for intermediaries or clearinghouses to adjudicate permissions. Smart blockchain contracts would allow for immediate data transfer to pre-determined entities, or in emergency situations, a durable power of attorney could add permissions to a smart contract.

Conventional approach data transfer requires third party intermediaries, causing delays, higher costs, and potential for fraud and abuse.

Blockchain eliminates middlemen and allows for seamless and secure transfer of data/information.

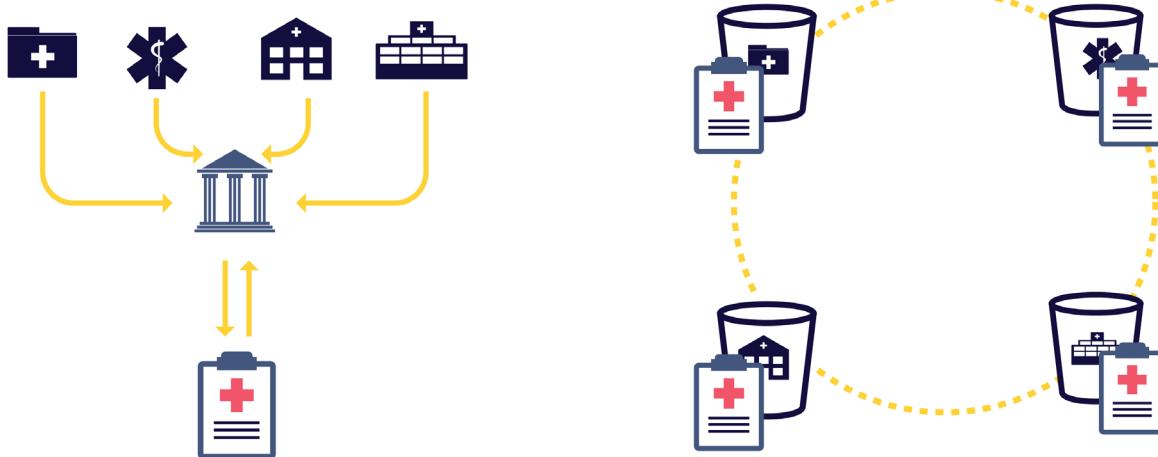


Figure 1: Decentralized and open-sourced processing enables data liquidity.

Medical imaging, medications, nutritional intake, diagnoses, and other clinical and behavioral data will be integrated from various sources including EHRs, wireless devices, smart phones, commonly used mobile applications, and legacy software administrative and clinical systems. This will be done on an open sourced distributed ledger, so that additions and subtractions to the health record were understood and auditable. The result will be a self-sovereign personal record tied to a unique global identifier that would travel with patients beyond state and national boundaries. **Figures 2 & 3** illustrate the healthcare system before and after a MintHealth enabled solution.

To be clear, blockchain is not meant to eliminate legacy systems, but rather harvest them in a way that produces greater efficiency, at lower cost, and improved clinical outcomes. The intelligent control of records access noted here and enabled by the MintHealth platform would obviate the need for custom access to each EHR and siloed system, catalyzing our movement to liquid data that can be seamlessly and securely transported from one stakeholder to the next.

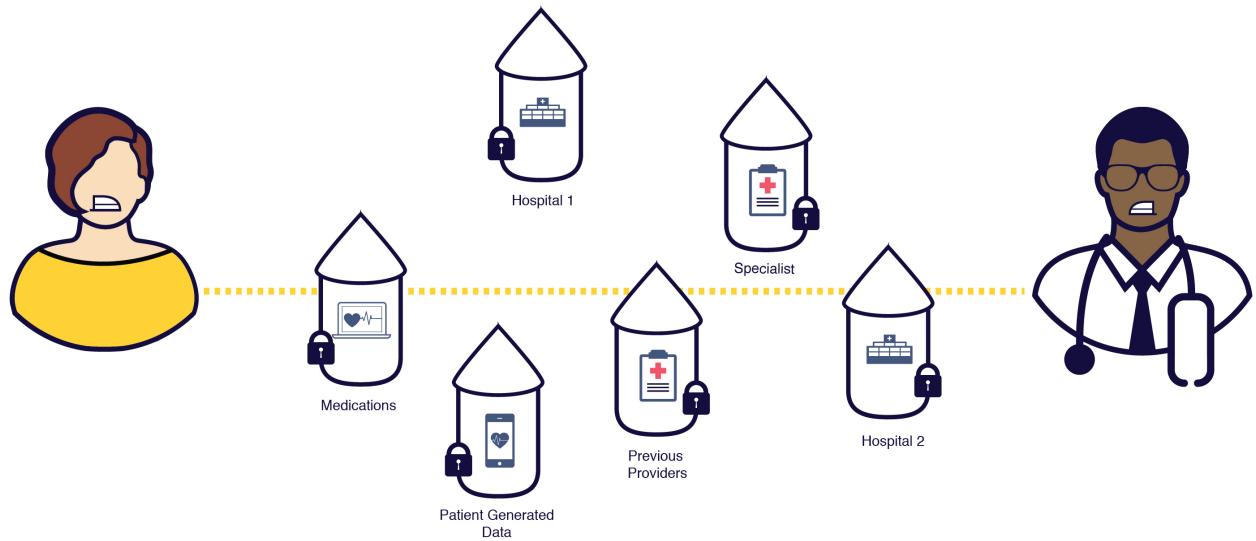


Figure 2: Data siloes preclude the delivery of personalized care and force patients into a passive state

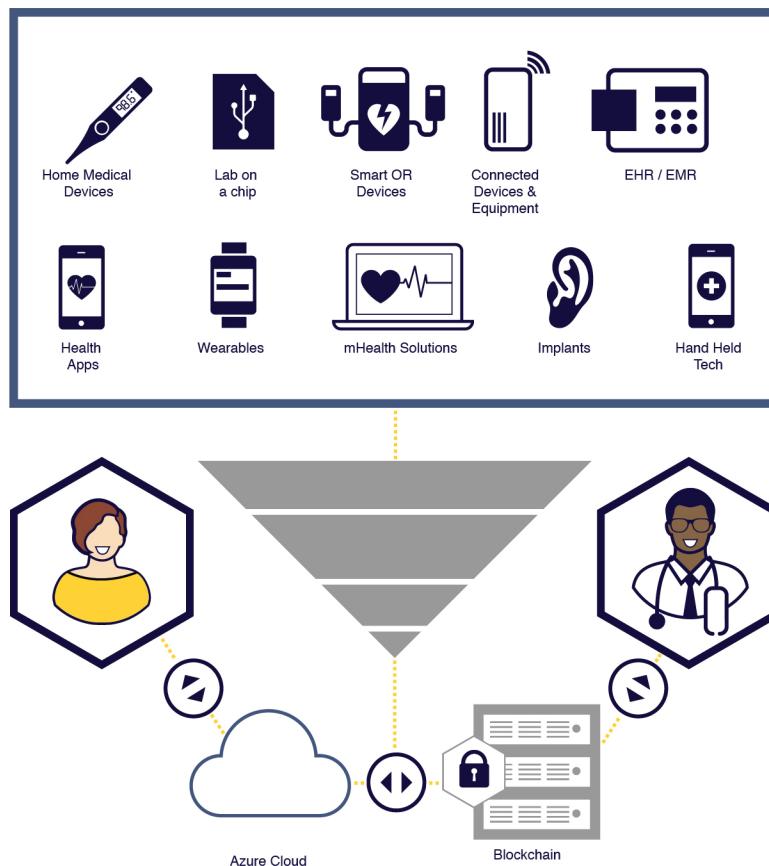


Figure 3: Data liquidity from all medical record sources breaks down siloes to empower patients

1.2 U.S. Healthcare – The Perfect Storm

The U.S. spends over \$3.2 trillion on healthcare annually, with 90% spent on preventable chronic conditions such as diabetes, obesity, heart disease, and cancer.⁴ Despite this astronomical economic outlay, the U.S. remains near bottom in cost and quality outcomes compared to other OECD countries.¹⁰ Factor in the 3.5 million people turning age 65 annually who have at least one chronic condition, and one sees an unsustainable economic model.¹⁰

Currently, U.S. healthcare costs outpace GDP growth by over 2%, placing costs over \$5 trillion and 20% of GDP by 2022.¹¹ At this rate, U.S. healthcare costs will soon be greater than the GDP of 99% of countries worldwide. If something drastic is not done to halt the inexorable rise in healthcare costs seen today, future generations of U.S. citizens will spend \$1 of every \$2 earned on healthcare simply sustaining a broken system.

Today, 70% of adults in the U.S. aged 18-64 have private insurance paying for their healthcare costs.¹² These insurance Payers are positioned to rapidly adopt more effective and innovative solutions. Given the dire economic situation and the large mix of non-profit, government, and private insurers, we believe the U.S. is the ideal laboratory to implement a token-based solution that can be adopted by government and private Payers worldwide.

1.2.1 Aligning Healthcare Stakeholders

The U.S. healthcare market serves as an ideal microcosm of global dysfunction, as substantial evidence leaves no doubt that those paying for, delivering, and receiving healthcare operate in a system of misaligned incentives.^{13,14} Key stakeholders include the following:

- **Patients** receive healthcare delivered by Providers. They pay premiums, co-payments, and deductibles. Along with Providers, patients contribute data for electronic health records, although patient generated data and behavioral information on vital signs, diet, physical activity, real-time alcohol, tobacco use, and more has been largely omitted from EHR platforms.
- **Providers (doctors, nurses, and other clinical staff and health institutions such as hospitals, clinics, and health systems)** deliver care to patients. They submit financial claims to Payers, receiving fees reimbursed for billable services performed. This is known as a fee-for-service model. Providers are the main clinical contributors to and users of the electronic health record. Private practitioners work for themselves or as part of a group of Providers. These Provider groups frequently contract with other hospitals, health systems, and vendors to provide specific services (e.g., medical imaging, surgery centers, specialty care). Kaiser Permanente, Sharp Healthcare, Scripps Health, and Ascension Health (among thousands of others), are health systems that include a diverse group of Providers to offer a complete spectrum of care.
- **Payers** are insurance entities that reimburse Providers for covered healthcare services. In the U.S., approximately 67% of Payers are private companies, including commercial insurance companies and self-insured corporations, while approximately 37% are government agencies and programs, such as Medicare and Medicaid/MediCal.¹² About 33% of healthcare insurance dollars flow from private companies, and 67% from governmental programs.¹⁴

Private insurers strive to keep medical loss ratios (*percentage of premium dollars paid by patients that the Payer in turn spends on healthcare*) low in order to increase profitability, reduce premiums, and increase market competitiveness. Government's primary goal is to provide access to needed care to citizens who may be disadvantaged from income, age, or disability standpoints, while controlling costs. Low medical loss ratios predominately result from a healthier patient population and adequate access to preventive care.

- **Electronic Health Record (EHR)** Systems are secure clinical data repository and line management/clinical workflow systems that combine healthcare data from support systems such as laboratory, radiology, medical imaging, and pharmacy, and enable electronic access and communication among Providers for facilitating care delivery. EHR systems also support the collection of data for uses other than direct clinical care, such as billing, quality management, outcomes reporting, resource planning, and public health disease surveillance and reporting.¹⁵
- **Pharmaceutical & Biotechnology Companies** develop drugs, products and services used in the diagnosis, cure, mitigation, treatment, and prevention of disease.
- **Medical Device Companies** develop instruments, machines, implants, in vitro reagents, and other products and services used in the diagnosis, mitigation, and treatment of disease.
- **Pharmacies** are responsible for management of medication inventories, and compliant fulfillment of medications and remedies prescribed by Providers. These entities now also serve as satellite medical clinics for acute care needs.
- **Research & Academic Institutions** exist for the advancement of knowledge in science and medicine through discovery, experimentation, research and teaching.

1.2.2 Growing Focus on Value-Based Care

Under the current fee-for-service reimbursement framework, increased disease prevalence equals greater numbers of office visits and procedures, and increased revenues for Providers. Coupled with low or no reimbursement for preventive services, chronic illness at epidemic proportions occurring in a fee-for-service construct has led to an “epidemic” care model that focuses on delivering episodic, catastrophic care at volume, and without regard to cost-effectiveness, quality, or outcomes (*value*).¹⁴ Unfortunately, the vast majority of Americans are left to navigate the complex seas of disease prevention on their own. The result has been poor, with U.S. outcomes ranked last among OECD nations, while healthcare expenditures per capita rank highest.¹⁰

The good news is that the shift to value (*ratio of quality to cost*) and away from volume-based, fee-for-service-driven care is underway. The U.S. Centers for Medicare and Medicaid Services (CMS) – the largest Payer in the nation – recently established several reimbursement mechanisms for chronic care management (CCM) and behavioral health (BH) services where patients above age 65 with chronic conditions receive support for medication compliance, transportation, preventive screening, education, and counseling between office visits. Early data shows promising success with these programs driving significant return on investment (ROI) and positive health outcomes. In a recent case study, MD Revolution, a proven platform for chronic care management, demonstrated a \$3.5M reduction in hospitalization claims (5x ROI) and reduced 30-day re-admissions by 50% in over 3,500 CCM patients over an 8-month time span.¹⁶

As described further in later sections of this whitepaper, the MintHealth solution leverages existing IP from technology platforms including MD Revolution.

In addition to value-based programs like CCM and BH services, the U.S. Congress established the Medicare Access and CHIP Reauthorization Act (MACRA) in 2015, aimed at aligning Provider payments with value. Starting in 2017, all U.S. Providers of healthcare must report to CMS on chronic disease management performance from 3 categories: quality, practice improvement, and advancing care information.¹⁷ These reports are used to reward or penalize Providers through increased or decreased reimbursement rates based on their scores for these measures.

Providers may qualify for financial incentives, or more importantly, avoid penalties based on their activity in 6 or more quality metrics (*out of 271*), 4 or more practice improvement initiatives (*out of 92*), and 9 out of 15 measures for advancing care information.¹⁷ Starting in 2019, Providers will face incentives or penalties from 4% - 9% of all Medicare payments, which will place millions in revenue at risk for Providers with suboptimal metrics in the categories noted above.

While we applaud this recent reimbursement move toward value-based care, U.S. stakeholder alignment is far from complete (*remember the three primary stakeholders at the outset of this white paper: patients, Providers, and Payers*). The government programs touch on an important and expanding U.S. demographic – those greater than age 65. However, these programs fail to address most of the working population in the U.S. who receive healthcare insurance from their employer or privately. Most importantly, these government programs fail to directly incent the most important participant in the healthcare ecosystem – the patient.

For health systems to achieve substantial and sustainable cost reductions, patients must be rewarded for engaging in health-promoting activities and positive behavior change. Data repeatedly demonstrate that incentives coupled with social support, education, and gamification reduces disease burden and costs related to managing chronic conditions.^{7,18-20}

2 The Vidamint Solution

“Technology in the 21st century will be for chronic diseases, what vaccines and antibiotics were for infectious diseases in the 20th century.”
– Samir Damani MD, PharmD, FACC

MintHealth is a blockchain-enabled health data platform (**Figure 4**) that aligns key stakeholders around empowered patients and improved population health. Through enhanced data liquidity and a self-sovereign health record combined with a unique token incentive called Vidamints.

The unifying thread to changing patient behaviors is engagement via: (i) education, (ii) self-tracking of health metrics to improve awareness, (iii) social support, and (iv) financial incentives. Fortunately, the rapid rise of mobile infrastructure and smartphones has made patient engagement scalable and cost-effective. The total number of mobile phones in use is nearly 5 billion and rising, with over half being smartphones.^{21,22} Accordingly, the necessary infrastructure for connecting patients with their health data is in place and growing. MD Revolution will provide an exclusive license (*among token incentive companies*) for MintHealth to leverage its patented and leading patient engagement technology platform.

Now imagine MintHealth, a smartphone app (**Figures 6-9 below**) that engages patients with daily messages reminding them to track metrics including blood pressure, glucose, pain, stress, sleep, weight, among other clinical and behavioral metrics. This messaging in the app will be tailored to personality types and key principles of behavior modification like “readiness for change” and “self-efficacy.” It serves to increase patient awareness around key health trends – both good and bad. Data transfers, managed by smart contracts and the patient’s self-sovereign health record, allow physicians, clinical staff, family, friends, and caregivers to access patient information on a secure, controlled, and auditable basis, thereby informing overall patient health and building a patient-centered community for ongoing support.

Upon completion of salutary behaviors patients will also receive incentives for behavior change in the form of Vidamint tokens. Vidamint tokens will be managed and adjudicated through the blockchain and stored in a digital wallet. Vidamint tokens will be redeemable for certain benefits such as lower insurance premiums, discounts on prescriptions, health and wellness brands, and preventive services. MintHealth will receive a transaction fee in the form of VIDA tokens each time a user (e.g. Payer or Provider) creates and assigns a health behavior to a patient, as outlined in Section 5.1.

The goal of the MintHealth model, is for data to be universally accessible to the patient (not restricted in scope by institution), free flowing (liquid), and secure, moving between patients, Providers, and electronic health records. Under the model, smart contracts will secure this data in the cloud and allow immediate encrypted, patient-permissioned access on the patient’s behalf to anyone, anytime, anywhere – whether in acute care settings such as the emergency room, or at home. A unique global identifier will be permanently linked to the patient’s self-sovereign health record that contains diagnosis, medications, laboratory data, as well as key patient-generated data on nutrition, exercise, vital signs, and demographic information that would be continuously updated.

The self-sovereign health record will create a holistic view into the patient’s overall health. When combined with the incentive of a Vidamint token, this holistic view will be critical for informing the assignment of behaviors that drive highly targeted health outcomes. The result will be an engaged patient who is incentivized, informed, supported, and empowered with the tools needed to take a proactive approach to their own health.

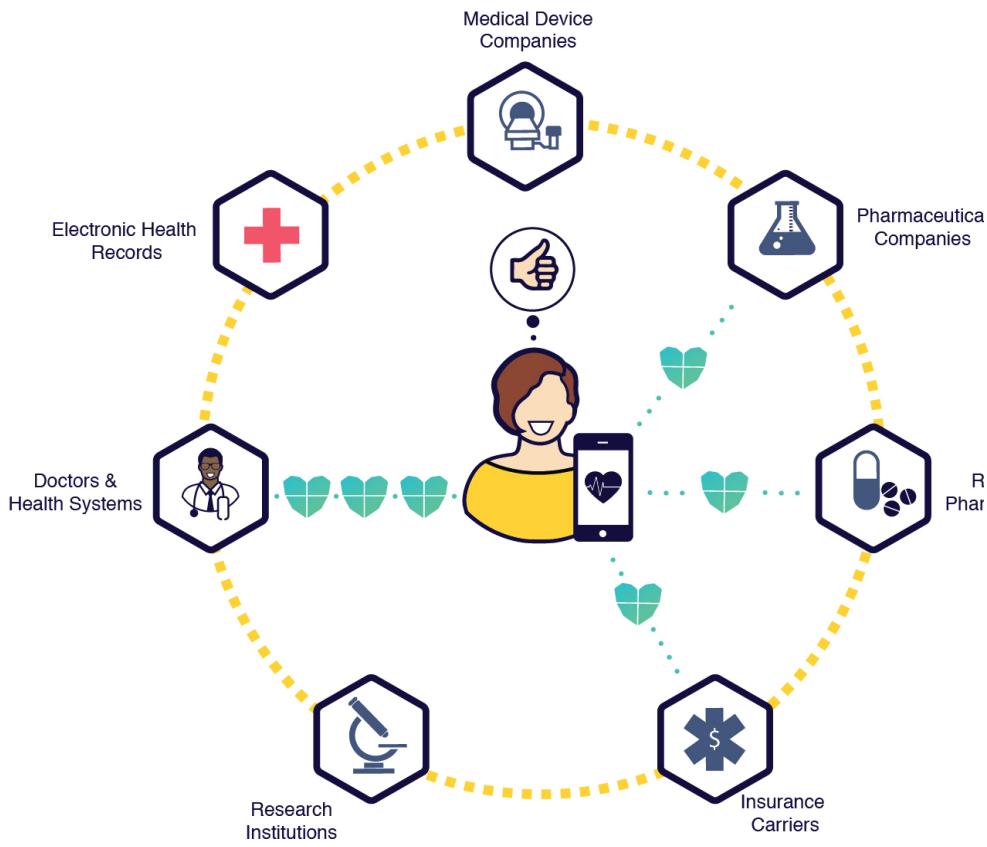


Figure 4: A token-based ecosystem aligns key stakeholders around the proactive patient and provider.

3 The Vidamint Ecosystem

3.1 Vidamint Model, Ecosystem Adoption, & Partnership Integration

The overarching mission of MintHealth is to leverage blockchain technology for deploying a self-sovereign health record and to establish Vidamints as the gold standard incentive model for aligning healthcare stakeholders around patient empowerment, and improved clinical outcomes at lower cost.

Pilot programs with established partner organizations (see *Section 3.2 below*) will drive initial adoption of Vidamints. By leveraging existing patient engagement platforms provided by MD Revolution, Inc., the MintHealth platform will drive down healthcare costs of managing patients with or at risk for complications from chronic conditions (*hospitalizations, emergency room visits, etc.*). This would reduce the quantity and dollar amount of patient insurance reimbursement claims, ultimately reducing costs for Payers. Thus, these Payers would have significant incentives to invest in an ecosystem such as MintHealth and purchase the Vidamint token. Notably, the MD Revolution CCM platform has already demonstrated its capability to reduce healthcare costs for Payers in a chronic disease population as noted in **Figure 5** and Section 1.2.2 “Growing Focus on Value-Based Care” above.

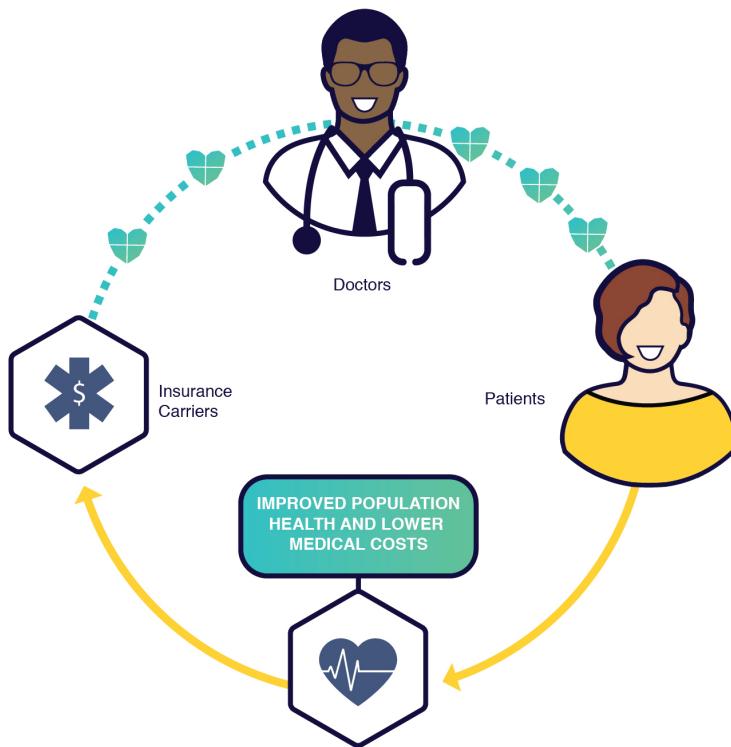


Figure 5: Patient and Provider Vidamint incentives will result in improved population health and lower costs

The cost savings realized for Payers that leverage the Vidamint model will in turn drive further adoption of Vidamints by additional commercial and government healthcare programs globally. The company is aware of the challenges concurrent with adoption of new technologies by patients and Providers. The U.S. healthcare sector alone is a \$3.2 trillion per year industry, with a unique set of participants ranging from individual patients and small family practices to large not-for-profit organizations, health plans, hospital systems, and insurance companies. The industry is complex and historically slow-moving. Accordingly, MintHealth has established an ecosystem development team to drive rapid adoption of the MintHealth platform and Vidamint token. This team is expected to:

- **Leverage foundational ecosystem** partnerships (see *Section 3.2 below*) to drive the development and rapid distribution of the Vidamint token.
- **Establish and/or utilize relationships** of established partner companies including but not limited to MD Revolution, NucleusHealth, Microsoft, Greenway, and Reachify Inc. to expand the depth and breadth of the MintHealth platform and ecosystem.
- **Identify, prioritize, and originate relationships** with additional leading healthcare companies, ranging from self-insured corporations, Accountable Care Organizations (ACOs), large hospital systems, and insurance companies to targeted specialty health practices.
- **Establish relationships** with leading industry associations, non-profit organizations, and patient advocacy groups – critical stakeholders in the healthcare sector.

- **Build a network of partners**, providing a robust set of attractive options for the holder of Vidamint to redeem the token for health-related goods and services within the MintHealth ecosystem (see Section 5.4 below).

- **Design and implement targeted programs** with all of the partners above to encourage purchase, adoption and usage of the Vidamint token across the ecosystem.

3.2 Foundational Ecosystem Partners

- **MD Revolution** – A leading technology-enabled service platform for chronic disease management used by tens of thousands of patients and physicians nationwide. Its proprietary automated clinical tool is proven to reduce costs for insurance carriers. A recent case study in 3,500 patients with multiple chronic conditions demonstrated a 5x ROI for the US Centers for Medicare and Medicaid services. MD Revolution is fully integrated with the top 6 electronic health record vendors, and has established distribution channels with Greenway Health, athenahealth, and eClinicalWorks. These distribution channels provide direct access to over 200,000 physicians and 100 million patients nationwide.

- **NucleusHealth** – a leader in the business of moving and interpreting complex medical images and data to speed diagnosis, treatment planning and ultimately patient recovery. The organization seeks to create a new image management ecosystem that allows secure access by caregivers, patients, and their loved ones when they need it, from anywhere and on any device. An ecosystem that also opens the door for developers to create a multitude of new applications such as tools for better workflow management and machine learning.

- **Microsoft** – a worldwide leader in software, services, devices and solutions that help people and businesses realize their full potential. Microsoft Azure is an open, flexible, enterprise-grade cloud computing platform solution for proactive, personalized healthcare with security and compliance for sensitive data.

- **Sharp Healthcare** – a not-for-profit integrated and regional healthcare delivery system located in San Diego. Sharp Healthcare includes four acute-care hospitals, three specialty hospitals, two affiliated medical groups, and a health plan. With more than 2,600 affiliated physicians and 18,000 employees, Sharp is a foundational and full spectrum Provider of healthcare in San Diego.

- **Arch Health Medical Group** – a San Diego based multi-specialty, not-for-profit, medical group with 80+ doctors and providing care for nearly 100,000 patients.

- **Pacific Accountable Care** – a partnership of healthcare Providers who work together to improve the quality, coordination and efficiency of patient care.

- **Pacific Accountable Management** – A national organization that assists physicians and Provider groups navigate the many requirements of running a practice practice in a value-based care era, while improving revenues and reducing costs through economies of scale.

Successful integration with partners will drive rapid adoption with other key corporate, commercial, and government health plans. The MintHealth organization has established an Ecosystem Development Team to execute these business development activities.

3.3 MintHealth, Inc.

MintHealth, Inc. is responsible for integrating existing technology platforms from NucleusHealth, MD Revolution, and Reachify into a blockchain enabled platform for delivering preventive healthcare and chronic disease management (see *Section 3.5 below*). The business development team will leverage existing relationships with Payers, Providers, EHR vendors, and health systems for adoption of the Vidamint token as noted above.

Notably, the company's leadership team consists of successful entrepreneurs, healthcare, and technology executives with over 200 years of combined experience (see *Section 8 below*). The company is based in San Diego, California.

3.4 MintHealth Trust

A unique feature of MintHealth, will be the creation of MintHealth Trust, an entity that is expected to provide governance for the MintHealth ecosystem. MintHealth Trust is expected to be built on a set of formally established guiding principles that include but are not limited to the belief that patient data must be managed on a secure, protected, and HIPAA compliant basis. The Trust is expected to play a critical role in defining the policies and procedures that govern the use and characteristics of this data. Because patients should have ultimate sovereignty over their personal identity and health record, they should have the ability to influence, guide and approve the corresponding data use policies. We envision that the Trust will create policies and submit them to the patient population for vote and ratification. The Trust board is expected to consist of members from leading healthcare companies, non-profit organizations, and patient advocacy groups.

3.5 MintHealth Platform and the Science of Patient Engagement

The MintHealth application (*app*) will be an evidenced-based tool using data, incentives, and gamification to engage patients across four key areas:

- 1. Awareness:** Self-tracking & Education
- 2. Social Support:** A Strong Influencer
- 3. Gamification:** Game of Goals
- 4. Financial Incentives:** The Vidamint

Awareness/Education: **Figure 6** highlights the interface designed to (i) raise consciousness, and (ii) control positive stimuli, two processes that are integral parts of the established Transtheoretical Model (*TTM*) of Behavioral Change.²³ Under the *TTM* framework, the app supports making positive, intentional changes in behavior that result in improved health outcomes. This approach is further supported by randomized studies highlighting the smart phone as a platform for behavioral interventions. For example, Hartin and co-workers measured clinical outcomes relative to behavioral logs/day.²⁴ Analysis of these logs against primary outcome measures revealed that participants who improved their

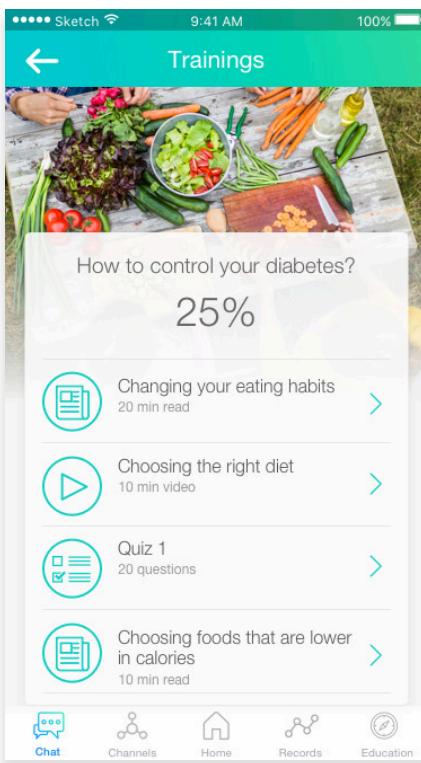


Figure 6a
Training around disease management improves patient awareness

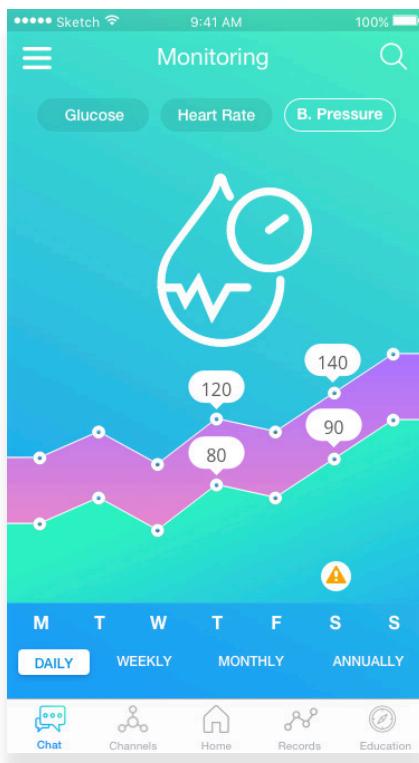


Figure 6b
Self-tracking of relevant health data (e.g., blood pressure)

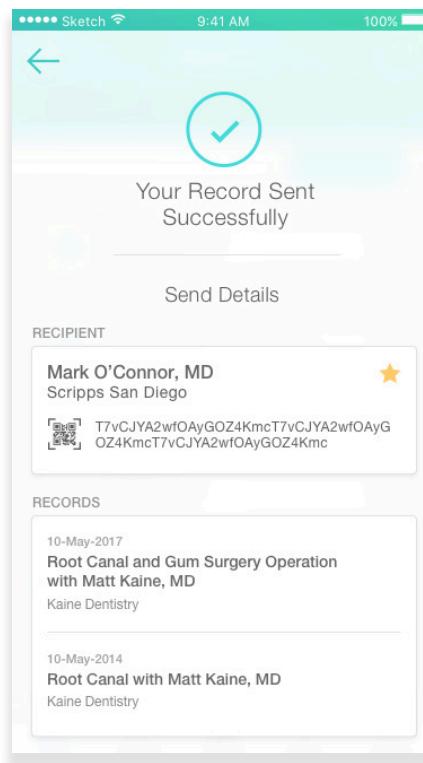


Figure 6c
Seamless transfer of medical data highlights true data liquidity

high-density lipoprotein cholesterol levels during the study duration answered a statistically significant higher number of questions per day (*mean* 8.30, *SD* 2.29) than those with no improvement (*mean* 6.52, *SD* 3.612), *p*=.003.

Figure 6 also demonstrates the app enabling a self-sovereign, secure, and free flowing health record between ecosystem participants – true data liquidity. The ability for the patient to serve as the steward of their own health record promotes patient empowerment, furthering a move toward improved health outcomes.

Social Support (Figure 7): The MintHealth app will be designed to emphasize social network behavior that has been empirically shown to facilitate favorable behavior modifications for chronic diseases.^{7,18,20,24} Social networks employ a number of different mechanisms to help bring about change. The above figures highlight a number of support and exchange mechanisms, in addition to an influence mechanism (**Figure 7a** – suggesting an additional bike ride the following week). **Figures 7b and 7c** illustrate a patient centered community where Alice Connor, a patient with hypertension and diabetes, has a series of exchanges with health coach Tracy Lyn. Importantly, studies support that methods of social intervention bring about sustained behavioral changes, a critical aspect to mitigating chronic diseases.^{25,26}

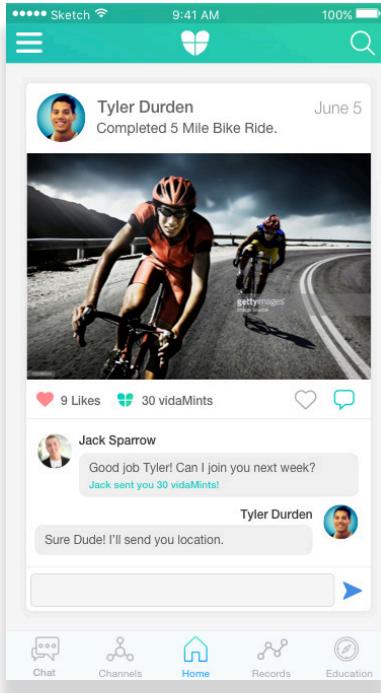


Figure 7a

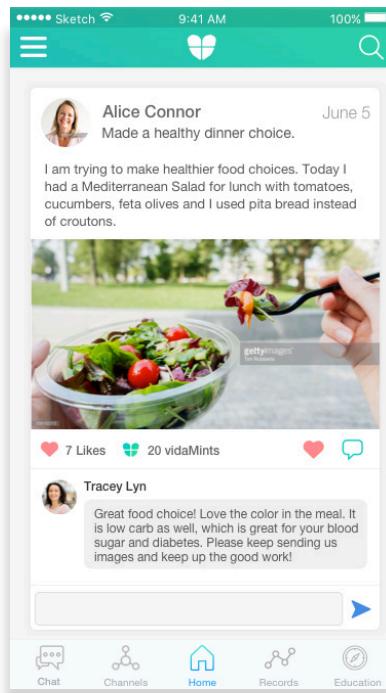


Figure 7b

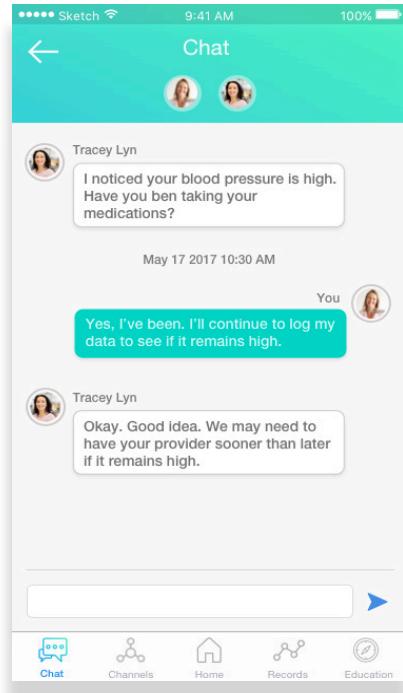


Figure 7c

Figure 7: A Strong Influencer

Gamification for Good: Gamification employs game mechanics in activities typically not thought of as games, such as health, to engage people by leveraging their natural tendencies for competition, achievement, collaboration and charity.

A growing body of literature demonstrates that gamification²² can enhance favorable health behavior modification. In fact, relative to a traditional public health campaigns, online gamification strategies were two (2) times as effective in impacting behavior change.^{25,27} **Figure 8** below demonstrates MintHealth's persuasive app architecture. When applied to chronic diseases such as diabetes, gamification processes including goal setting, and reinforcement through reward, which are proven tactics to change health outcomes.²³ Gamification draws on the Theory of Planned Behavior (TPB) and Johnson and co-workers recently conducted a systematic review of the literature related to health outcomes.²⁸ In reviewing over 21 papers, 59% reported positive findings, with the evidence strongest for the use of gamification to target behavioral outcomes, particularly physical activity.

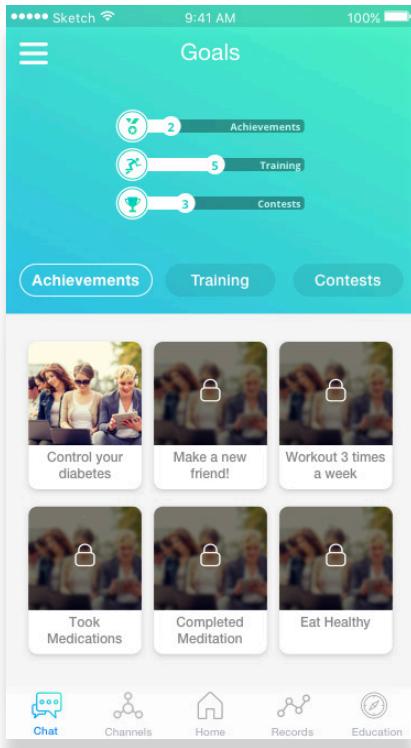


Figure 8: Game of Goals

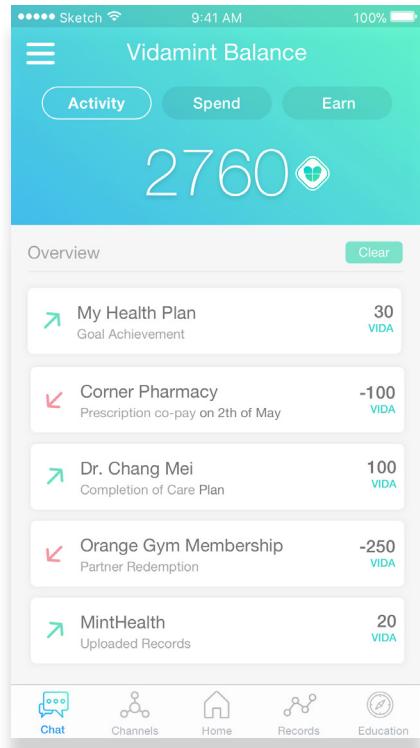


Figure 9: The Vidamint

Financial Incentive for Health (**Figure 9**): Numerous studies support the role of financial incentives in modifying chronic behaviors. Kullgren and co-workers demonstrated financial incentives were effective for patients in weight-loss programs, both in the short-term and for longer-term maintenance.²⁹ Additional studies support these findings in other areas of risky behaviors, including smoking cessation and HIV risk.²⁰

Healthcare Providers also have been shown to change behavior in response to financial incentives,^{30,31} and the U.S. Center for Medicare and Medicaid Services (CMS) has leveraged those findings to introduce the Quality Payment Program (QPP), paying physicians more for higher quality outcomes (*value-based care*), in contrast to traditional fee-for-service (*volume-based care*). This is the same method used by the federal government successfully to increase the annual rate for EHR adoption by hospital Providers from 3.2% in the pre-period (2008-2010) to 14.2% in the post-period (2011-2015) using Meaningful Use financial incentives through the HITECH (Healthcare Information Technology Economics and Clinical Health) Act as part of the American Recovery and Reinvestment Act (ARRA) of 2009. During the same periods, non-eligible hospital Providers annual EHR adoption rates were 0.1% and 3.2%, respectively, showing the impact of the incentives.³² Vidamint incentives will be used to motivate and reward Providers to engage with their patients in developing actionable plans targeted towards patient involvement in achieving health. In short, both patients and Providers respond positively to financial incentives and the introduction of the Vidamint is poised to become the gold standard currency for health promotion.

The required patient engagement elements noted within this current section are currently being deployed in one form or another by two of our key partner organizations – NucleusHealth and MD Revolution. These organizations today are independently leveraging digital solutions for chronic disease management and health data interpretation and transfer. MintHealth will synthesize and integrate existing solutions into a single blockchain application to generate a liquid and self-sovereign personal health record and patient engagement tool. The company's access to technology and associated intellectual property stem from inter-organization agreements and collaboration.

4 MintHealth Architecture

4.1 MintHealth Platform

MintHealth's central offering is self-sovereign identity management – empowering users with control of their health data. Patient health data will reside in storage allocated to each patient with access to that data controlled by the patient via the Ethereum blockchain. The Ethereum blockchain smart contract contains metadata about information sharing, role-based authentication control, and pointers to data residence – the contract does not contain electronic protected health information (ePHI) or other information which would not be considered public. Storage and access are important pieces of the patient controlled self-sovereign health record and fast access to data also has a meaningful real-time impact on patient care.

The MintHealth platform will consist of two key components:

- 1. Patient mobile app & web portal** – a patient-focused app and portal that employs relevant content and the science of engagement to promote healthy behaviors and positive outcomes in patients with chronic conditions. As described in Section 2.1, this includes but is not limited to gamification and financial incentives. This platform leverages an existing patient engagement platform developed by MD Revolution, one of two core technology partners of MintHealth (see Section 3.2 above). Communication with Providers and a patient's expanded care team (*family, friends, caregivers*) provides the needed patient centered community while secure data transfer facilitates seamless identity and record management.
- 2. Provider mobile app & web portal** – a Provider-focused app that facilitates viewing of medical data and images. Access will have been granted by the patient via the MintHealth app. In addition to communication regarding care plans, collaboration tools to connect with expanded care Providers include screen share, live whiteboard, and video conferencing will coexist. This product offering leverages existing technology solutions provided by NucleusHealth, the second of MintHealth's core technology partners.

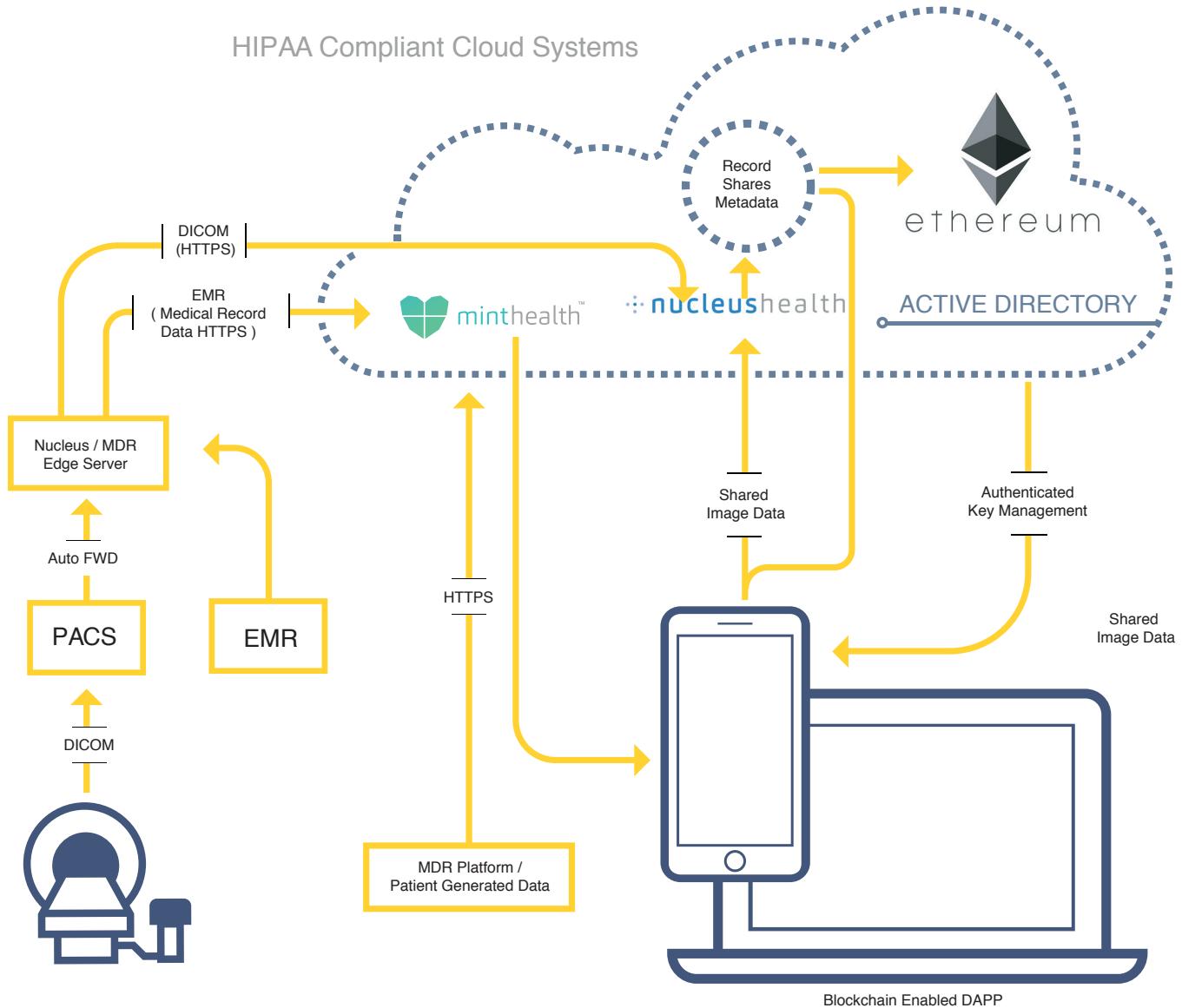


Figure 10: Blockchain enabled flow of data

MintHealth will leverage Ethereum blockchain technology for federated medical record sharing across multiple platforms in a decentralized fashion. MintHealth utilizes Azure Active Directory for federated identity and Azure Key Vault for key management. The problem of multiple identifiers for the same patient across multiple silo systems is solved by allowing patients and facilities to associate and tie together identities existing in different locations and in Ethereum blockchain metadata. This allows for multiple Ethereum blockchain identities to be associated as well as multiple medical record numbers or other medical identification systems to be combined into a global patient index (GPI).

SMART CONTRACT #1

End User System A, Org A issues a Smart Contract (SC#1) to Share Data with **Org B** on a Consortium Blockchain.

SC#1 establishes trust b/w Org A and Org B

- 1** Anchor (Pointer with hasgvalue)
of the Medical Data document

- Recipient Org
- Access level granted to the Recipient
- Expiration Date of Data Share

- 2** End User of Org A signs with
Org A Public Key

STATE : DATA SHARE PENDING

- ✓ Org B's Key authenticated
- ✓ End User Alice Provides Org
Public Key
- ✓ Org Public Key Authenticated

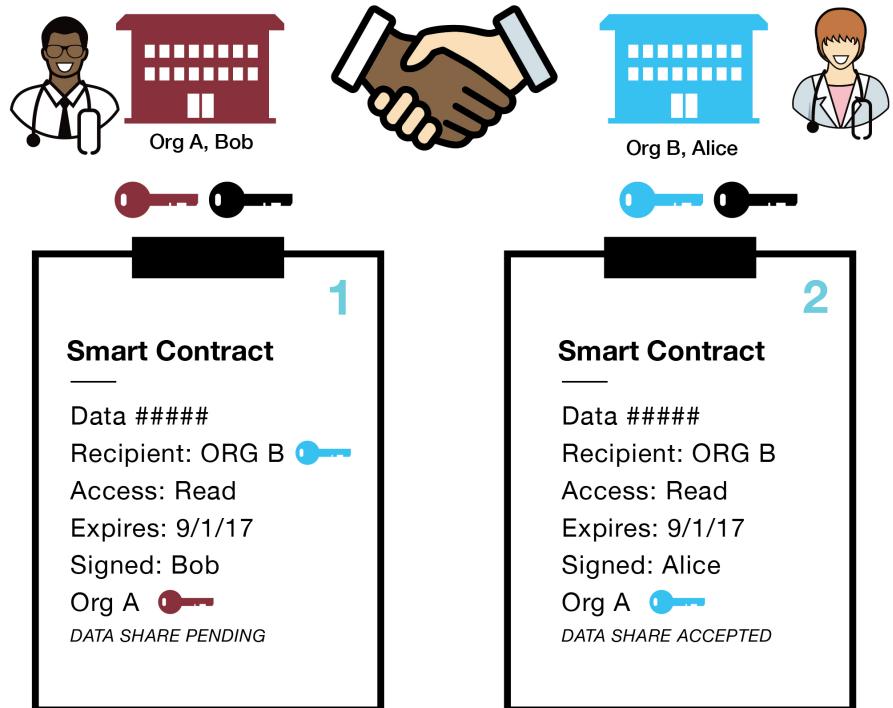


Figure 11: Overview of smart contracts

4.2 Partner Integrations

MintHealth will consist of a set of resources deployed in Microsoft Azure that manages the patient engagement core content and application services. MintHealth is establishing technology licensing relationships with NucleusHealth, MD Revolution, and Reachify to accelerate development of the platform and ecosystem. MintHealth will leverage NucleusHealth's patient medical record storage and sharing (*including NucleusHealth's patented StatStream technology which allows for display of large complex data sets like medical images*), MD Revolution's Provider and patient portals for patient engagement and care management, and Reachify's cloud communication technology for secure patient communication. These elements are integrated with the core MintHealth technology stack and blockchain implementation via API and hosted instances.

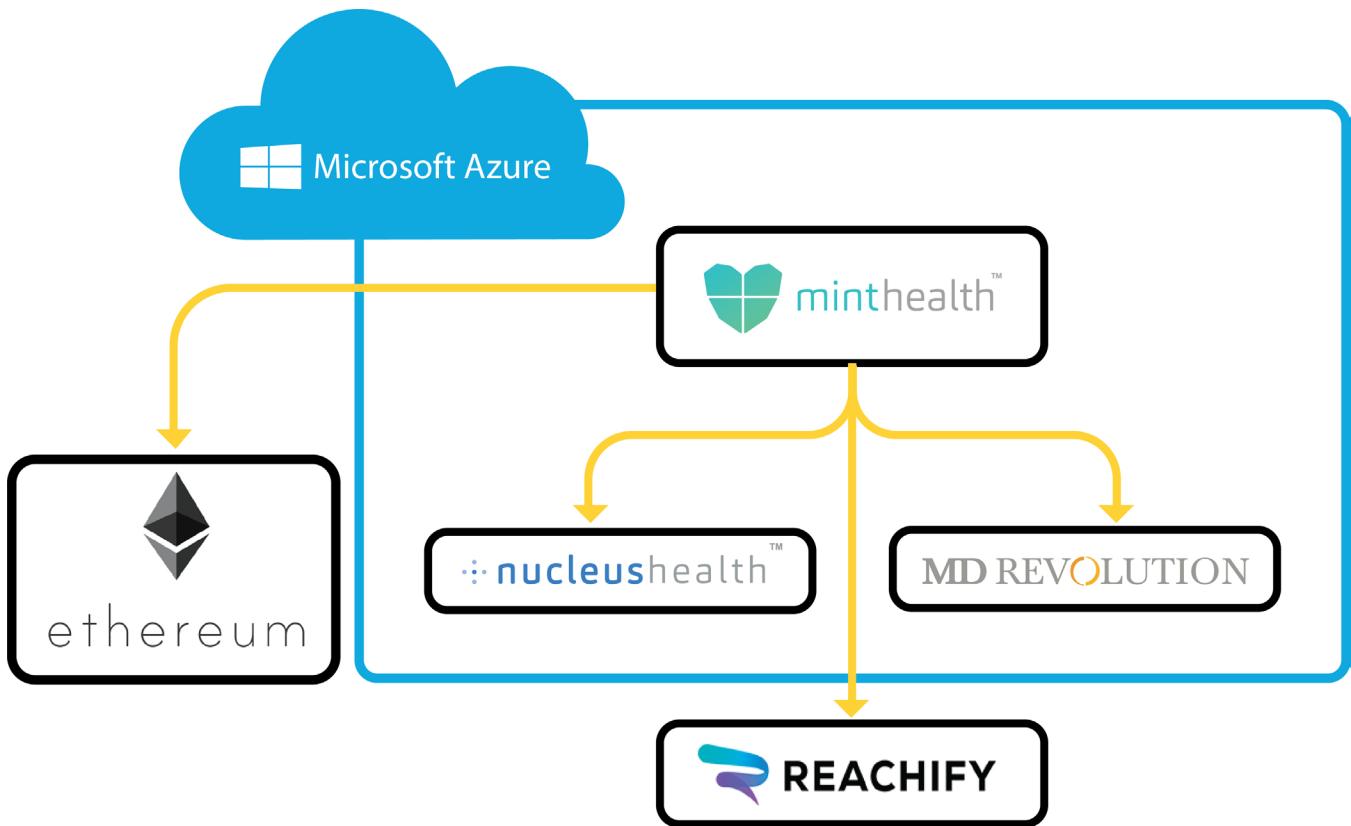


Figure 12: Hierarchy of resources deployed in MS Azure

4.3 Security & HIPAA Compliance

MintHealth's platform (consistent with HIPAA security standards) will provide access to electronic protected health information (ePHI), restricted based on roles and responsibilities, policies to govern the release or disclosure of protected health data, and secure data in transit via secure socket layer (SSL) and data at rest via AES 256 encryption. Also, other security measures for IT disaster recovery, network safeguard, system access, and geo-redundant backups protect data that is not encrypted on the blockchain.

Comprehensive security governance will be created to manage security measures and perform routine audits as part of MintHealth's policies and procedures. These functions will verify security controls are up-to-date and implemented on a timely basis for application security, access controls, storage security, infrastructure security, and network security.

MintHealth will be establishing a HIPAA Business Associate Agreement (BAA) with Microsoft to comply with HIPAA and the HITECH Act. The HIPAA BAA covers in-scope Microsoft services, including: Azure Active Directory, Azure DNS, Azure Resource Manager, Key Vault, Security Center, Storage, Virtual Machines, Virtual Network, VPN Gateway, and supporting infrastructure and platform services.

5 Token Mechanism

The MintHealth token, Vidamint (*VIDA*), will facilitate core functionality and incentivizes actors in the MintHealth ecosystem.

The VIDA will have six core functions:

1. Delivering incentives for healthy patient behaviors
2. Driving patient adoption
3. Establishing the patient self-sovereign health identity and record
4. Compensating Provider administration
5. Powering ecosystem redemption
6. Enabling patient governance & voting

5.1 Delivering Incentives for Healthy Patient Behaviors

Uses of gamification in healthy behavior modification and financial incentives to modify behaviors are core to the MintHealth ecosystem. Thus, the core function of the VIDA token is to reward patients for engaging in healthy behaviors assigned to them through the MintHealth mobile app. Behaviors are assigned to the patient in two ways:

- Automatically, based on individualized patient data available to the MintHealth platform; and
- By a Provider or the patient's network (*family member or friend*), who will have the ability to select and assign specific behaviors to the patient, based on their knowledge of the patient.

Patients will receive VIDA tokens (N_{VIDA}) for each completed behavior, based on a formula determined by a range of difficulty level of the behavior (D_L).

$$N_{VIDA} = \left\{ N_{MIN} + \frac{(D_L^2 - D_{MIN}^2)}{(D_{MAX}^2 - D_{MIN}^2)} \cdot (N_{MAX} - N_{MIN}) \right\}$$

D_L will range between D_{MIN} and D_{MAX} (for example 1 - 10), and N_{MIN} & N_{MAX} are the minimum and maximum number of tokens that can be awarded to any patient for a successfully completed behavior. Based on above formula, the MintHealth app will recommend a number of tokens for a given behavior, and the behavior originator will have the ability to change that number within a range of N_{MIN} and N_{MAX} . The D_L , N_{MIN} and N_{MAX} will be based on guidelines established by the MintHealth Trust.

As an example use case, a Payer may want to create an incentive for all patients over 50 years to walk 6,000 steps a day for one week, which has a difficulty level of 6 on a scale of 1 - 10. With N_{MAX} of 20 tokens, the system will recommend an award of $(62 - 12) / (102 - 12) * 20 = 7.2$ tokens for this behavior. Payer may accept this recommendation or change it to be within the given minimum and maximum.

Patients will receive VIDA tokens from one or more of the following three originators:

- **Payers will provide VIDA tokens** to patients for completing assigned behaviors. Payers will select from a list of potential behaviors and corresponding difficulty level and reward quantity based on guidelines established by the system and MintHealth Trust. These behaviors are expected to be assigned and available to the patient programmatically via the MintHealth app based on the patient's health profile. Each time a patient completes an assigned behavior, a corresponding amount of VIDA tokens will be transferred from the Payer's wallet to the patient's wallet via a vault smart contract. For all healthy behaviors that are created and funded by the Payer, the successful completion of such healthy behavior can be tracked and managed either automatically (e.g. *through the patient's biometric data or blood panel results*), or judged by the Provider. In both instances, the Provider will play the role of qualified, independent administrator.
- **Providers may also provide VIDA tokens** to patients for completing assigned behaviors. As in the case of Payers, Providers will select from a list of behaviors and corresponding reward quantity, based on their expertise and guidelines established by the MintHealth Trust. Providers will "self-fund" these rewards, which should reduce or eliminate incentive to collude with patients or otherwise engage in fraudulent behavior. As reimbursement and the U.S. healthcare system evolves to the value-based model, MintHealth will provide additional reward and incentive for Providers achieving better health outcomes in partnership with their patients as measured according to the MIPS program of MACRA.
- **Patient's network** (e.g. *family members or friends*), on the MintHealth platform will be able to select from a list of healthy behaviors and corresponding reward quantity, based on the guidelines established by the MintHealth Trust and transfer VIDA tokens to each other for successful completion. This "peer-to-peer" functionality will empower the social component of the MintHealth ecosystem. As in the case of Provider transfers, the requirement for the patient's network to self-fund transfers should reduce or eliminate incentive to collude or commit fraud. To drive adoption of patient-to-patient transfers, MintHealth will provide the reward creator with a set of healthy behavior suggestions to get them started.

The MintHealth platform will have a dynamic set of "pre-loaded" healthy behaviors available for an originator to select from based on guidelines established by the MintHealth Trust and evidence-based science. This will seed initial ecosystem adoption and engagement. In addition, originators can also create their own target healthy behaviors, assign a corresponding difficulty level and VIDA token reward, and submit them to the MintHealth Trust for review and approval. This process allows for crowdsourcing healthy behaviors from the ecosystem, while ensuring the behaviors align with positive health outcomes. Once approved, a submitted behavior will be available to the originator and included in the list of potential behaviors for all ecosystem participants.

Under this construct, the total number of VIDA tokens that a patient receives is the sum of all the behavior incentives in which the patient is successful in changing their behavior:

$$N_{\text{TOTAL VIDA}}^{\text{PT}} = \sum_{I=1}^N S_{\text{PT}}^I \cdot N_{\text{VIDA}}^I$$

$$S_{\text{PT}}^I = \begin{cases} 0 & \text{UNSUCCESSFUL} \\ 1 & \text{SUCCESSFUL} \end{cases}$$

For facilitating the patient behavioral reward system, and to cover ETH gas costs within the ecosystem, MintHealth will charge a transaction fee for creating incentive programs, based on the following formula:

$$\text{TX FEES}_{\text{TOKENS}} = \left\{ \frac{\text{INCENTIVE TOKENS}_{\text{TOTAL}} \cdot \text{ADMIN COST}_{\text{PERCENTAGE}}}{100} \right\}$$

$$\text{INCENTIVE}_{\text{CREATION COST}} = \left\{ \text{INCENTIVE TOKENS}_{\text{TOTAL}} + \text{TX FEES}_{\text{TOKENS}} \right\}$$

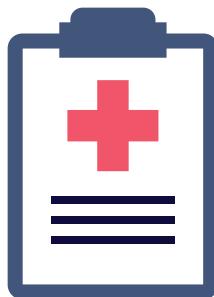
INCENTIVE TOKENS_{TOTAL} is the total number of tokens being assigned to a given patient population within the Payer's insurance network and **ADMIN COST_{PERCENTAGE}** is MintHealth's transaction fee percentage.

For example, if a health plan or Payer is creating a reward program with total 2,000 VIDA tokens as incentive for 200 patients, and the MintHealth transaction fee is 1.5%, the health plan's or Payer's **INCENTIVE_{CREATION COST}** is 2,030 ($2000 + (2000 * 1.5)/100$) VIDA tokens for initiating the reward program. 2000 will be delivered to vault smart contract and subsequently transferred to patients' wallet based on successful behavior completion. 30 will go to MintHealth for administering the platform.

If the program is cancelled, any unutilized VIDA tokens in the vault smart contract will be refunded to the originator who funded the behavior.

Driving Patient Adoption

Patients will enroll in the MintHealth ecosystem through the MintHealth mobile app or web portal by establishing a profile that includes basic identify information:



Patient Profile Information

1. First name
2. Last name
3. Mobile number
4. Email address
5. State of residence
6. Insurance carrier
7. Etc.

A digital wallet and associated public/private keys will be created for the patient as part of the onboarding process. Interaction with the platform will be through tools such as MetaMask, MyEtherWallet, Mist or a command line. Once onboarding is complete, the system will designate a set of initial VIDA tokens to encourage adoption and engagement with the platform (“*Adoption Tokens*”). These Adoption Tokens will be funded by the Payer, and will initially reside in an escrow vault smart contract that is linked to the patient’s new wallet address. Each Adoption Token will be tied to specific activities that incentivize and encourage the patient to actively participate on the platform (“*Initial Adoption Activities*”), e.g.:

- Setting up the patient’s self-sovereign health record (see *Section 5.2 below*)
- Inputting key information, including the patient’s primary care physician and pharmacy
- Setting up and authenticating the patient’s approved devices
- Engaging in basic, easily achievable healthy behaviors to get the patient started (e.g., *eating an apple*)

Each time the patient completes an Adoption Activity, an Adoption Token will be transferred from the escrow vault to the patient’s digital wallet via smart contract. If the patient does not complete these Adoption Activities within the designated adoption period (e.g. *3-6 months from date of enrollment*), unearned Adoption Tokens will be automatically returned to the original funding entity.

Onboarded patients will receive a number of Adoption Tokens (T_{ADOPT}) equal to the number of Initial Adoption Activities ($N_{ADOPTION\ ACTIVITIES}$).

$$T_{ADOPT} = N_{ADOPTION\ ACTIVITIES}$$

Email and phone details will be provided by patient as part of the sign-up process, and notifications will be sent reminding/encouraging the patient to complete their engagement activities and earn their Adoption Tokens prior the end of the three-month period.

5.2 Initializing Patient Self-Sovereign Health Identity and Record

Onboarded patients will be assigned the initial task of establishing their self-sovereign health identity and personal health record (“*Personal Health Record*” or “*PHR*”) in the MintHealth ecosystem. With privacy and security being of paramount importance, this PHR will be encrypted and support to establish a self-sovereign health identity will be provided through MintHealth support services. The PHR will reside securely in the cloud and will be a global unique record of the patient’s individual health data. The objective of the PHR is to aggregate a patient’s disparate health information into a single dataset, optimizing the patient’s use of the platform and overall management of personal health.

As stated above, the patient will have the opportunity to fund the establishment of her/his PHR using Adoption Tokens provided by the Payer as part of the sign-up process. If the patient’s Payer is not on the platform, or the patient does not have health insurance, the patient can also purchase VIDA tokens directly on the secondary market. All quantities of VIDA used as payment to initiate a self-sovereign health identify and PHR shall be burned via smart contract.

The cost of setting up the PHR will be equal to one VIDA token.

Once this process is complete, the patient’s digital wallet will be linked to his/her PHR and associated ID on the platform. The PHR will be self-sovereign, providing the patient with control of and access to their global, unique persistent identity throughout the MintHealth ecosystem. The patient will approve and manage access to their PHR in the MintHealth ecosystem. This self-sovereign ID is owned by the patient, and can never be revoked or access to it prevented.

Self-sovereign identities are fully owned and controlled by the creator, and do not rely on centralized third-parties for creation or validation. This identity is capable of storing the hash of various data points linked to the user like their biometric data, hash of their picture IDs, and other forms which can independently identify the user.

The unique ID will be implemented through a blockchain identity Provider in decentralized trustless authentication, such as Uport, Civic, or Nuid, etc. These systems leverage artificial intelligence and verifying algorithms to detect the user login via different devices and locations, and in turn link their IDs to a global identifier. We will incorporate an automated process with a manual approval step to recover lost/forgotten credentials for the user. The exact process will be defined after the final selection of the identity Provider.

5.3 Compensating Provider Administration

MintHealth views the platform as a tool for achieving the important objective of aligning patient and Provider incentives to enhance patient health outcomes. To achieve this objective, the platform is designed so that Providers act as “independent administrators” in partnership with patients for whom they collaborate in achieving healthy behaviors.

The platform aligns patient and Provider incentives by empowering Providers to prescribe and agree upon behaviors for patients, enabling the transfer of VIDA tokens to patients upon their successful completion. The ecosystem and its adoption will benefit from incentivizing Providers to play this administration/collaboration role. However, in many instances, the funding entity for the VIDA tokens provided to both patient and Provider will be a third party (*i.e. the Payer*).

While the Provider is in the best position to arbitrate success of a patient's behavior, that same Provider cannot also be compensated based on the results they are being asked to impartially judge. Therefore, the Provider will be compensated based on a separate metric: encouraging on-going use and engagement by the patient in the platform.

The Provider will receive a number of VIDA tokens, funded by the Payer, based on the formula below which is independent of whether or not the patient successfully completes assigned behaviors or how many behaviors the Provider administers for the patient, thereby reducing incentive for the Provider/patient to collude or commit fraud.

The number of VIDA tokens a Provider receives in compensation (N_{VIDA}) will be correlated with the number of unique patient universal IDs in the system (N_{IDS}), an on-going impartial algorithmic assessment of use/engagement in the platform by those patients (e.g. *the platform can track active logins in the app or behaviors activated*) that will be applied as a multiplier (M_{ACTIVE}).

In addition, the Provider will only receive tokens from a Payer if that individual patient is a member of the Payer's network. (*Note: Providers can still assign their own self-funded patient behaviors regardless of whether a patient is in a given Payer's network*). Provider tokens will be granted periodic (*monthly or quarterly*) rather than in real time to avoid noise and ensure the system has statistically significant data on patient engagement to calculate the correct number of tokens.

The number of VIDA tokens a Provider receives is defined in the follow equation:

$$N_{VIDA} = \left\{ \frac{N_{ACTIVE}^2}{N_{PANEL}^2} \cdot N_{MAX} \right\}$$

In the equation, N_{PANEL} is the total number of patients under the Provider's care that are also part of the Payer's network. A patient shall be deemed eligible for N_{PANEL} when the Provider has submitted a claim associated with that patient to the Payer during the prior 18 months. Each time a patient within a Provider's panel initiates an assigned behavior the MintHealth mobile app, the patient is considered active and included in N_{ACTIVE} . N_{ACTIVE} is the number of patients and N_{MAX} is the number of incentive tokens for a Provider with 100% enrollment of patients associated with that Provider.

This formula gives the Provider an accelerated incentive to enroll more of their patients into the platform. The higher percentage of the panel enrolls, the higher the rewards for the Provider.

As an example, if a Provider has 2,000 patients on her panel, she may have 400 registered and active in the MintHealth ecosystem. With a maximum award of 500 tokens for a 100% enrollment, she will receive $(400^2 / 2,000^2) * 500 = 20$ tokens; if she encourages 400 more patients to enroll, she gets a total of $(800^2 / 2,000^2) * 500 = 80$ tokens.

5.4 Powering Ecosystem Redemption

To drive and incentivize patient adoption of health behaviors, the VIDA token must have inherent value and benefits within the MintHealth ecosystem. A patient or Provider who receives VIDA token can unlock its value in two ways:

- Token Redemption – MintHealth is establishing partnerships with healthcare Providers, Payers, and other healthcare companies to participate in the MintHealth ecosystem. With these partners, the VIDA token can be used as a method of payment to partially offset healthcare and related expenses. Examples include:
 - Insurance premiums
 - Co-pays, deductibles, and out-of-pocket expenses
 - Preventive services, primary care
 - Goods and services purchased from partner companies (e.g., *pharmacies, physical therapy Providers, spas, nutrition stores, etc.*)
 - Redemption sale of the token for ETH or other digital assets on the secondary market

VIDA token's value will be pegged to Ether (*ETH*) on the day of the token launch. The value of VIDA shall be established as follows:

$$\text{Value of VIDA token (in ETH)} = N_{\text{VIDA}} \times \text{VIDA}_{\text{INITIAL}}$$

For example, if **1 ETH = 300 VIDA** on the day of the token launch, then:

$$\text{VIDA}_{\text{INITIAL}} = 1/300$$

- Tiered Reward Program – similar to an airline or banking card reward program, patients and Providers will receive “status” benefits based on the total number of VIDA tokens earned in a given year. Examples of such benefits include:

- Discounts on insurance premiums
- Discounts on co-pays, deductibles, and out-of-pocket expenses
- Discounts on good and services provided by partner companies (e.g., *pharmacies, physical therapy Providers, spas, nutrition stores, etc.*)
- Access to special benefits (e.g., *events, app features, exercise classes, merchandise, etc.*)

The scope of these benefits will utilize a tiered reward structure (e.g., *bronze, silver, gold, platinum*). The tier will be based on the total quantity of tokens earned, not the balance of tokens in the holder's wallet at a specific point in time, thereby rewarding healthy behaviors and preventing a user from "buying their way" into a given tier. Movement into higher tiers will occur in real-time as users meet pre-defined thresholds, and movement into lower tiers will be assessed on a rolling 12-month basis from the time the user moved to the higher tier.

The tiered reward program shall be calculated as follows:

$$\text{TIER}_{\text{NOW}} = \text{TIER}_{\{1,2,3,\dots,N\}} \text{ if } \{\text{TOKENS}_{\text{LAST 12 MONTHS}}^{\text{PT}} \text{ in } (\text{TOKENS}_{\text{LOWER}}^{\text{TIER}}, \text{TOKENS}_{\text{UPPER}}^{\text{TIER}})\}$$

$$\text{TIER}_{\text{NEW}}^{\text{PT}} = \left\{ \begin{array}{l} \text{TIER}_{\text{NOW}}^{\text{PT}} \text{ if } \text{TIER}_{\text{NOW}}^{\text{PT}} \geq \text{TIER}_{\text{12 MONTH MAX}}^{\text{PT}} \\ \text{TIER}_{\text{12 MONTH MAX}}^{\text{PT}} \text{ if } \text{TIER}_{\text{NOW}}^{\text{PT}} < \text{TIER}_{\text{12 MONTH MAX}}^{\text{PT}} \end{array} \right\}$$

For example, if a patient earns enough VIDA tokens in September to qualify for Gold tier, she will at least have Gold tier till the following August. If she earns more VIDA tokens in December that will qualify her for the Platinum tier. After the following November, she may move down to other tiers based on the subsequent number of tokens she earns.

5.5 Enabling Patient Data Governance & Voting

In the second phase of development of the MintHealth ecosystem, patients will have the ability to make their personal data available to third parties to enhance research and development of new medical treatments and therapies (see *Section 7 below*). Patients will be rewarded in VIDA tokens corresponding to the type and value of the data they provide. Research organizations, pharmaceutical companies, and medical device manufacturers will utilize this data and fund the reward tokens provided to patients.

This use of patient data must be managed on a basis consistent with HIPAA and state law requirements. The MintHealth Trust is expected to play a critical role in defining the policies and procedures that govern the use and characteristics of this data. Because patients should have ultimate sovereignty over their personal identity and health record, they should have the ability to influence, guide and approve the corresponding data use policies.

To address this need, holding a balance of VIDA token will provide the patient with a right to vote (*VR*) on the data use policies established by the MintHealth Trust. In essence, possession of the token will create an access right and signals that the patient is invested in the MintHealth ecosystem and its policies on the use of data.

In an effort to eliminate risk, that bad actors will purchase large amounts of tokens and exert undue influence on the policy voting process, a voter should have a patient self-sovereign ID in the MintHealth ecosystem, and each patient will be entitled to only one vote, regardless of the number of tokens in their possession at the time of the vote. The voting mechanism will be monitored and enforced by linking each vote to the patient's self-sovereign ID (SS_{ID}) in the MintHealth ecosystem. This is designed to ensure duplicate votes cannot be cast by the same patient and that all votes are actual persons.

If $N_{VIDA} > 0$ and $SS_{ID} \neq 0$, then $V_R = 1$

When a given voting period begins, the platform will check the patient's wallet and (i) verify an existing balance of VIDA tokens, or (ii) in the event the wallet does not contain VIDA tokens, the platform will notify the patient and encourage them to complete a behavior or purchase VIDA token on the secondary market to enable their voting right. Each policy vote will be open for a specified period of time to ensure quorum of votes and to provide patients who do not have a balance of VIDA tokens with sufficient time to acquire VIDA through one of the methods above.

6 Token Release

MintHealth will enable a self-sovereign, secure health record for the patient and create a unique incentive model for ecosystem participants to align around patient empowerment and health. To achieve this goal, MintHealth is creating 897,625,000 Vidamint tokens ("VIDA") to initiate the project. VIDA will be Ethereum-based ERC20 compliant tokens that leverage the Ethereum protocol. The allocation of VIDA is as follows:

- 460,000,000 VIDA tokens will be sold in a public sale event ("Token Generation Event" or "TGE")
- 200,000,000 VIDA tokens will reside in a time-locked smart contract per the details below ("Time-Locked Tokens")
- 150,000,000 VIDA tokens will reside in a time-locked smart contract and will be subsequently distributed to identified ecosystem participants to drive adoption per the details below ("Market Seeding Tokens")
- 83,625,000 VIDA tokens sold to strategic purchasers in advance of the TGE ("Pre-Mine Event")
- 4,000,000 VIDA tokens will be reserved for bounties ("Bounties")

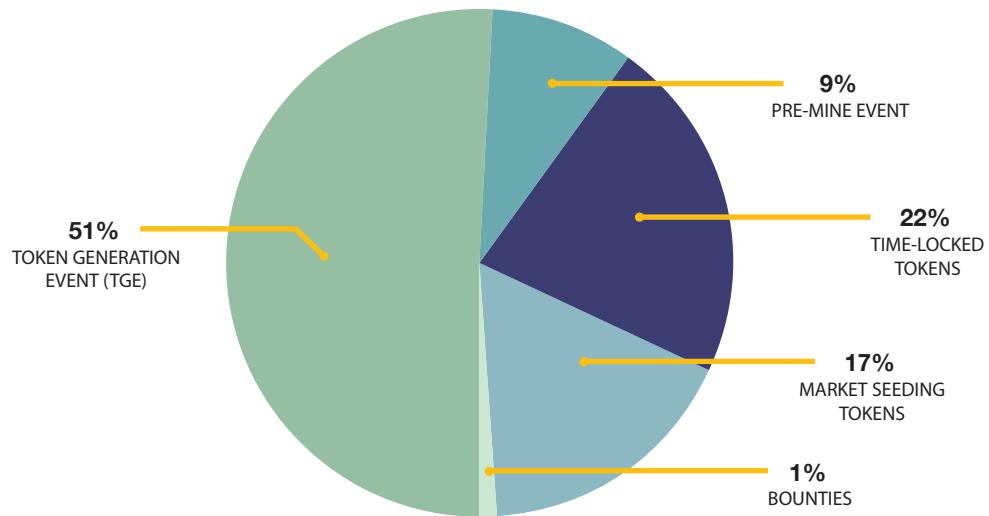


Figure 13: Token Allocation

6.1 Token Generation Event

The Token Generation Event for VIDA will have the following details:

- Proceeds: funds received will be denominated in Ethereum (*ETH*) and Bitcoin (*BTC*)
- Maximum financing: 55.2 million in USD
- Minimum financing: 15 million USD
- Token contract address: TBD (*will be published through TGE communication channels 48 hours before the TGE date*)
- Launch date and time: TBD (*will be published as part of public announcement of TGE event*)
- Block number: TBD (*will be published as part of public announcement of TGE event*)
- Token launch time-frame: 30 days, based on block number TBD (*will be published as part of public announcement of TGE event*)
- Token Generation Event completion: TGE will end when either the maximum financing is raised or block number TBD (*will be published as part of public announcement of TGE event*) is reached. If less than the minimum financing is raised, the proceeds will be returned to VIDA purchasers

6.2 Time-Locked Tokens

MintHealth believes it is better to sell tokens over time as the company (i) continues to develop and release new advancements of the MintHealth solution, and (ii) achieves its targeted adoption milestones

of the VIDA token across the healthcare ecosystem. As such, MintHealth has decided it is in the best interest of the ecosystem to retain 200,000,000 or 22% of VIDA after the TGE. This provides MintHealth with the flexibility to initiate future VIDA sales if warranted to fund development of the solution. To signal the level of commitment MintHealth has for this project, the company shall lock up these tokens via smart contract with the following schedule:

- 50% unlocked 12 months after the TGE
- Remaining tokens unlocked 18 months after the TGE

6.3 Pre-Mine Event

Over the past six months, MintHealth has been engaging healthcare industry leaders, strategic partners, potential customers, and community members for feedback. MintHealth has decided to pre-sell 83,625,000 or 9% of VIDA in advance of the TGE in a Pre-Mine Event. Pre-Mine Event purchasers have been identified as participants who have influence in the healthcare sector and strong interest in seeing the MintHealth solution become a transformative for the healthcare industry. The proceeds from the Pre-Mine Event have been used to fund MintHealth solution development, smart contract creation, and audit, and legal review.

6.4 Market Seeding Tokens

The US healthcare sector is a \$3.2 trillion per year industry, with a unique set of participants ranging from individual patients and small family practices to large non-profit organizations, health plans, hospital groups, and insurance companies. The industry is complex and historically slow moving. To help seed adoption of the MintHealth ecosystem, the company is establishing relationships a set of key industry stakeholders (“*Pilot Partners*”) to participate in a pilot program. The goal of the pilot program is to (i) build an initial user base of patients actively engaging with the MintHealth app to improve their health, and reduce medical costs for respective Payers; and (ii) accelerate adoption by other healthcare Payers who will become major drivers of demand for the VIDA token.

On the date of the TGE, 150,000,000 or 17% of VIDA tokens will be delivered to a time-locked in a smart contact for the purpose of seeding the market opportunity for the VIDA token. MintHealth shall designate a minimum of seven (7) Pilot Partners to act as initial participants in the MintHealth ecosystem and receive the Market Seeding Tokens after the end of the time-locked period. The VIDA designated for the adoption pool will reside in a digital wallet that is transparent to all community participants, and all Pilot Partners will be announced in conjunction with distribution of their respective Market Seeding Token allocation. The timed-locked smart contract for Market Seeding Tokens shall include the following schedule:

- 50% unlocked 6 months after the TGE
- Remaining tokens unlocked 12 months after the TGE

6.5 Bounties

Security and maintenance of privacy are critical to the healthcare sector. To help secure the smart contracts used to develop the platform, MintHealth will place bounties to attract white hat hackers to identify and eliminate weaknesses and exploits. Their efforts will be (i) ranked based on severity and difficulty, and (ii) rewarded by the bounties pool of 4,000,000 or 0.4% of VIDA Token. Contracts will inherit from a Solidity Bounty Smart Contract pre-filled that can be collected by identifying an exploit. Any exploit

found can also be sent to security@minthealth.com. MintHealth takes security issues very seriously and recognizes the importance of engaging the community and maintaining privacy. MintHealth strives to coordinate with the security community to provide a reasonable disclosure process.

6.5.1 Reporting Security Issues

If you believe you have discovered a vulnerability, please communicate with MintHealth at **security@minthealth.com**. To facilitate this process, you may communicate with MintHealth via PGP, use our key TBD (*will be published as part of public announcement of TGE event*) to encrypt your communications.

- PGP URL: TBD (*will be published as part of public announcement of TGE event*)
- Security Actions: Once a vulnerability has been found, MintHealth will take the following steps to address the issue:
 - MintHealth requests reporter maintain the vulnerability and any communication confidential
 - MintHealth will investigate and verify the vulnerability
 - MintHealth will address the vulnerability and release a patch
 - MintHealth will publicly announce the vulnerability and patch
 - MintHealth will credit the vulnerability reporter, unless reporter wishes to remain anonymous

6.6 Use of Proceeds – Budget Allocation

Proceeds raised through the TGE and Pre-Mine Event will be budgeted in the following allocation:

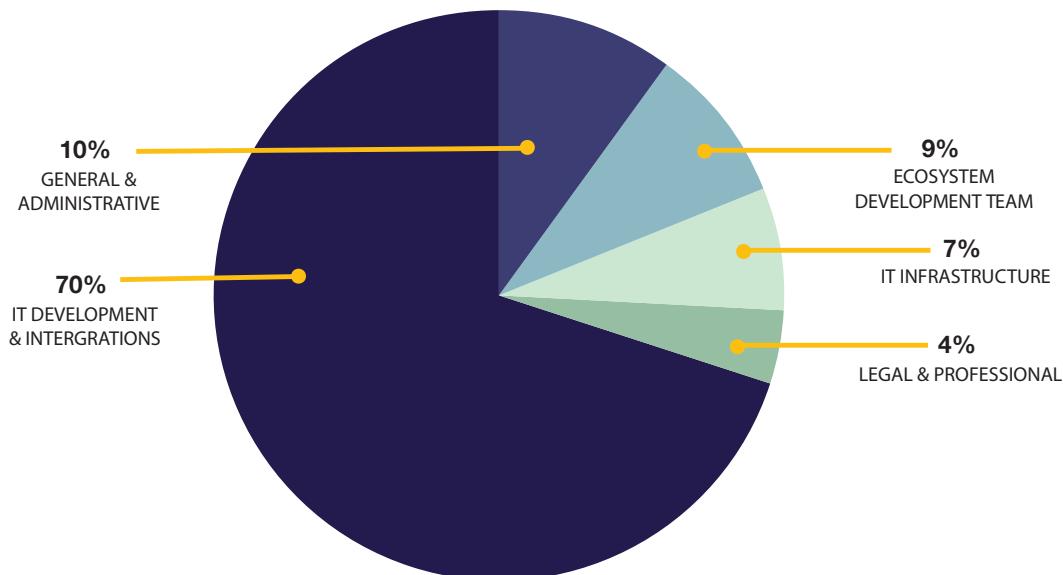


Figure 14: Budget Allocation

- Legal and Professional fees include those paid to ensure that MintHealth maintains compliance with all relevant regulations including HIPAA. It also includes fees paid to service Providers and partners assisting with the TGE process.
- Ecosystem Development Team will drive business development and rapid adoption with key commercial, non-profit, and government health entities.
- General & Administrative is the cost incurred during the normal course of business including general expenses, office rent, various filing and other fees, and supplies.
- IT Development & Integrations is the cost of creating the MintHealth architecture, including mobile app, web portal, back-end infrastructure, Ethereum nodes, IPFS nodes, licensed systems, HIPAA compliant cloud systems, security audits, etc. including the cost of developer wages and contractor expenses. It also includes the cost of integrating with existing HER vendors, health plan systems, and other platforms in the healthcare ecosystem.
- IT Infrastructure fees cover the cost of the necessary technology stack and processing environment to power the MintHealth system, such as hardware and cloud costs, servers, workstations for developers, devices, middleware, and other software costs.
- IT Support and Maintenance fees cover the cost of support, maintenance, end-user support, and ongoing updates of the MintHealth system and technology infrastructure as it is implemented and in production.

Examples of the type of employees and roles are set forth in Table 1.

Table 1: MintHealth Example Employees

Frontend Developers	Infrastructure Security Audits
Infrastructure/ Dev-Ops/Site Reliability Engineer	Smart Contract Audits
UX/UI Designers	Localizations
Product Managers	Auxiliary UX/ Design
QA and Testing Engineers	Auxiliary Marketing and User Engagement
Business Development Managers	Accounting/HR
Client Services Managers	Legal

7 Roadmap

7.1 Phase I: Core Ecosystem Creation – Key Capabilities

Phase I(a) – Create a virtuous cycle that rewards patients for healthy behaviors and Providers for value-based care

- Create a platform that leverages the patient's health record to generate a set of target behaviors that a patient can perform to improve their health
- Create a platform for consistent data sharing among all stakeholders contributing to the patient's health (e.g., *for verification of diagnosis and medications, eliminating duplicate therapies, and minimizing patient non-compliance*)
- Empower Providers and Payers and the patient's network with a platform that enables them to communicate targeted behaviors to the patient and then reward those patients for successful completion of each behavior using the blockchain to track and manage all rewards

Table 2 below outlines the areas of the platform wherein MintHealth will use blockchain technology to complete Phase 1(a).

Table 2 - Solution 1(a) Components

Solution Component	Blockchain Enabled
Incentive System	Y
Gamification System	Y
Token Transaction & Management System	Y
Permission Framework	Y

Phase I(b) – Patient self-sovereign personal health data

- Leverage the blockchain to empower the patient with their own universal, consistent, accurate and up-to-date health data
- Develop a blockchain platform that enables (and incentivizes) patients, Providers, Payers, EHR companies and other market participants to upload and maintain patient health data easily and securely within the cloud
- Provide access and EHR interoperability to such health data to coordinate care and drive more effective patient outcomes, and reduce overhead and burden on Provider resources

Table 3 below outlines the areas of the platform wherein MintHealth will use blockchain technology to complete Phase 1(b).

Table 3 - Solution 1(b) Components

Solution Component	Blockchain Enabled
Global, Unique Patient Identifier	Y
Permission Framework	Y
Data Model	Y
Blockchain Framework	Y

Phase I(c) – Provide access to patient data on a secure, privacy aware basis

- Eliminate single points of failure and bring consistent management & sharing of health data by accessing the cloud via blockchain
- Implement a decentralized identifier to create a tamper-proof system, backed by blockchain-based cryptographic protocols, to prevent non-permissioned access – thus ensuring security and privacy
- Create a system that provides cryptographically secured access to health data, whereby the patient can provide/revoke consent to approved parties

Table 4 below outlines the areas of the platform wherein MintHealth will use blockchain technology to complete Phase 1(c).

Table 4 – Solution I(c) Components

Solution Component	Blockchain Enabled
Roles & Authentication System	Y
Identity Management	Y

7.2 Phase II: Provider Identity and Incorporation of MIPS

Phase II(a) – to compliment the patient's self-sovereign health identity, MintHealth will develop a secure, unique identify for the Provider, similarly powered and managed by blockchain. This will enable precise communications to occur between patient and Provider, based on the authority of the patient to determine the exact Providers with whom they wish to share their health information. This unique

Provider identifier will have many uses, including the ability of MintHealth ecosystem participants to create patient-specific care teams, no longer limited by the organizational construct to which the physician belongs (i.e. a specific hospital) or insurance network the patients' insurance plan dictates. True patient empowerment and Provider independence will be a key objective.

Phase II(b) - As reimbursement and the U.S. healthcare system evolves to the value-based model, MintHealth will evaluate the incorporation of the MIPS program of MACRA into the Compensating Provider Administration token mechanism (see Section 5.3 above). This program has the potential to further align Provider incentives with healthy patient outcomes. MintHealth will assess and integrate the MIPS program into the token mechanism once: (i) it has reached sufficient adoption across the healthcare sector, and (ii) MintHealth is comfortable it will enable the Provider to continue acting as an impartial arbitrator of patient success.

7.3 Phase III: Virtuous Cycle for Health Data

Phase III – Self-sovereign sharing of clinical and behavioral data to ecosystem stakeholders for research and development and to facilitate innovation of medical therapies and services.

In this phase, patients through the MintHealth app would elect to share data with other ecosystem participants for the purpose of furthering research and development. In exchange, ecosystem participants would remunerate patient for their contributions with Vidamints. The MintHealth platform will enable pharma, life science, med device, Payers, and academic ecosystem participants to instantaneously access large and growing patient data sets (via smart contracts) that will further the understanding of key drivers of disease and health and transform the way in which chronic disease populations are studied. The information gleaned will be used to develop highly innovative and more cost-effective therapies and services.

8 Team

8.1 Founders & Board of Directors

Dr. Samir Damani – CEO & Director Dr. Damani founded MD Revolution with the vision of building the gold standard technology enabled service platform for chronic care management (CCM). Today, MDR is the leading platform in the nation for Medicare's CCM program, leveraged by thousands of patients and Providers across the nation. MD Revolution integrates patient generated data, electronic health records, physician workflow, and billing for the purpose of optimizing population health management. He has served in multiple strategic and operational roles, as well as led efforts in raising over \$43 million for the founding vision as CEO. Dr. Damani remains highly active as an MD Revolution Board Member and involved in strategy and clinical oversight. He also serves as a Clinical Instructor in the Department of Family & Preventive Medicine for the UC San Diego Medical School and is a board-certified practicing cardiologist at Scripps Clinic – a top 20 US News and World Report heart care center.

Dr. Damani has also served as a scientific advisor for the prominent journal, Science Translational Medicine, and continues to serve as a reviewer for Nature Genetics, Annals of Internal Medicine, American Journal of Cardiology, and the Journal of the American College of Cardiology. In addition to his medical training, Dr. Damani has a Doctorate in Pharmacy from the University of Georgia and a Masters in Clinical Investigation from the Scripps Research Institute.

Dr. Vishal Verma – President & Director Dr. Verma, a serial entrepreneur, and board-certified radiologist is the CEO of NucleusHealth, an active leader in cloud medical data management and interpretation of complex medical images to speed diagnosis, and treatment planning. Under the leadership of Dr. Verma, NucleusHealth has grown nearly 5X since 2010 and now currently provides service to over 400 facilities for teleradiology and over 2400 facilities for cloud medical image management. Dr. Verma's focus has been empowering patients with greater access and control of their healthcare journey by leveraging novel technologies like blockchain.

Dr. Verma's extensive background in radiology combined with a passion for better workflows and solutions to improve patient care while lowering costs all started with a medical degree from the University of Miami. Dr. Verma served as a Chief Resident at the University of Chicago and then completed an MRI fellowship at the University of California San Diego. He is currently licensed to practice in all 50 states. Dr. Verma has a strong track record of entrepreneurship and enjoys the challenge of bringing new ideas to market.

Wyche T. Green, III – Non-Executive Director (“Tee”) is the Executive Chairman and former CEO of Greenway Health™, where he has served in leadership roles since its founding in 1998. Greenway Health’s solutions are deployed at nearly 10,000 medical groups, clinics and enterprises across the U.S., where they’re used by more than 75,000 clinical professionals to improve patient care and to manage their financial and administrative processes more efficiently. A knowledgeable authority on healthcare reform, Green has been a contributing author on multiple scholarly articles in addition to authoring a chapter of the 2010 sequel to the award-winning book, Paper Kills. During his tenure at Greenway, Green has been involved in a total of six separate rounds of capital-raising activities, including two separate private equity partners, raising a total of \$87.5 million. In February 2012, Greenway completed an initial public offering, raising proceeds of \$77 million. Mr. Green has recently led Greenway through a go private transaction with Vista Equity Partners with an all cash transaction of \$644 million. A serial entrepreneur, Green has started several companies prior to Greenway Health across a wide array of business areas including transportation, hotel development, venture investing, agriculture/farming, music and entertainment. And, of course, active participation in several software companies.

8.2 Executive Management & Team

Dr. Jean Balgrosky – CIO Dr. Balgrosky is a former CIO of large, complex healthcare organizations, including Scripps Health and Holy Cross Health System (now Trinity Health System). With a PhD in Health Policy and Management, Jean serves on the faculty at UCLA Fielding School of Public Health. She is founder of Bootstrap Incubation, LLC, a firm established to invest, mentor, and grow life science and health information technology start-ups. She is author of Essentials of Health Information Systems and Technology, a graduate-level textbook for graduate health administration and management programs educating health professionals, clinicians, managers, and policy professionals about health information technology.

Patrick Daly – CFO Patrick is an entrepreneurial executive with greater than 5 years of start-up experience serving as a CFO and COO. With over 18 years with Deloitte and Ernst & Young’s accounting, tax and management consulting firms, he has successfully led teams in key operational areas involving finance, ERP implementations, IT infrastructure, strategic business planning, debt and equity financing, and e-commerce.

Courtney Hooton – Director of Communications Courtney brings an extensive background in media and corporate finance to her role. Prior to MintHealth, Courtney was an investment banker working in leverage debt capital markets at Deutsche Bank. She also worked in business development for Viacom in their marketing division, Scratch. She and her sisters co-founded and operated GolferGirl Magazine which had a national circulation of over 10,000 with subscribers in 50 states as well as Canada and Mexico. Courtney is a graduate of Harvard University and was a nationally ranked Junior and D-1 collegiate golfer winning four consecutive conference championships.

8.3 Collaboration Partners & Technical Team

Raleigh Harbour is a seasoned executive with nearly 20 years of experience in blockchain technology, SaaS software, online media, digital advertising, eCommerce, and business services. Raleigh currently serves as Co-Founder and Managing Partner of Genesis Block, a venture production studio focused on developing decentralized protocols, infrastructure, and applications leveraging blockchain technology. Through in-house innovation, vertical partnerships and strategic investments, Genesis Block accelerates the disruptive potential of blockchain and fosters its growth and adoption across every aspect of our lives.

Tanuj Nigam is a serial entrepreneur and technology/product co-founder of multiple start-ups. He is a senior architect and has developed multiple blockchain DApps for large commercial enterprises, government organizations, and startups across a wide variety of sectors. Tanuj has +20 years of experience developing enterprise software for clients such as Bank of America, Experian, and Allianz Insurance.

Umesh Lalwani founded and managed Assigncorp, a technology consulting firm with over \$130 million in revenue and +20 years of experience building scalable solutions for large enterprise companies and startups. He is leveraging the blockchain paradigm to define next-generation solutions to the systemic challenges in healthcare and public policy. Umesh draws on many years of working in the healthcare, fintech, and entertainment sectors to define solutions for a client's mission critical goals. Umesh has a passion for creative business models and loves to find synergy between business goals and collective human psychology.

Rafique Khan is a founder of Adroitsoft Inc., an entrepreneur and a senior healthcare IT consultant. Rafique leverages his +17 years of healthcare experience working with large enterprises such as Kaiser Permanente to develop leading edge solutions that improve safety and quality of patient care, reduce costs, and maximizing return on investment for client organizations.

Parker Hinshaw, founder of MaxIT Healthcare and CEO of MD Revolution, is a serial entrepreneur with 40 years of experience in the healthcare information technology and Provider space. He is also a principal of Bootstrap Incubation, LLC, and has started and run numerous companies in the healthcare and information technology spaces. Parker has a lifelong commitment to innovation in healthcare using information technology and believes passionately in the power of prevention and patient empowerment.

8.4 Advisors

Wendy Lee, Chief Legal Officer, block.one and ii5, is a senior corporate lawyer with over 15 years of private practice and in-house counsel experience. She has extensive experience working with technology companies including start-ups having worked at Cooley LLP in the Silicon Valley, California previously, and has particular expertise providing legal advice in relation to distributed ledger technology projects

(including the development of the EOS.IO software) and blockchain tokens. Wendy's broad corporate/commercial law experience includes corporate restructurings, VC/private equity transactions, setting up investment funds, joint venture transactions, complex M&A and advising with respect to insurance/reinsurance transactions. She was formerly Assistant General Counsel for the large NYSE-listed reinsurance company, Allied World Assurance Co. Holdings, which was recently acquired by Fairfax Financial Holdings Ltd. for US\$4.9 billion. In addition to California, Wendy has practiced law in Ontario, Canada, the Cayman Islands and Bermuda and is an offshore law specialist. Wendy has been recommended as a leading lawyer in Legal 500 Caribbean and has been included on Citywealth's IFC Power Women Top 200 list.

Blake Cohen, Co-founder and Chief Business Development Officer at SALT Lending. Working for Signet Partners for the last seven years, Mr. Cohen has worked extensively in emerging markets and in reviewing and producing contracts. He has an extensive and accomplished background in complex contractual negotiations and transactional deal-making, specializing in real estate, networking, and capital formation.

David Vorick, Co-Founder, Sia. Sia is a variant on the Bitcoin protocol that enables decentralized file storage via cryptographic contracts. These contracts can be used to enforce storage agreements between clients and hosts. After agreeing to store a file, a host must regularly submit storage proofs to the network. The host will automatically be compensated for storing the file regardless of the behavior of the client.

Jeremy Sohn joined Novartis, in November 2015, as VP, Head of Digital Business Development & Licensing supporting Novartis' Digital Medicines program cross-divisionally. In 2016, Jeremy also served as Global Head of Digital Development within Novartis, Global Drug Development. Jeremy is a serial software entrepreneur with more than 17 years of experience founding, managing and advising both healthcare and technology companies. Prior to Novartis, Jeremy was Managing Director & Operating Partner at MPM Capital where he led the firm's digital health investment strategy and partnership with Novartis. At MPM, Jeremy founded two companies, CentrosHealth (a mobile, patient-engagement platform designed to improve the patient experience during clinical trials, acquired by Clinical Ink) and TriNetX (a federated network of clinical data warehouses that optimizes clinical trial protocol design and patient recruitment).

Mark Jeffrey is a serial entrepreneur and author. He has co-founded five internet companies (three exits) and written eight books, including the Max Quick series (Harper Collins). Three times, he has conceptualized and built consumer products that generated millions of registered users in the first year. Most recently, Mark founded Guardian Circle, an app that lets friends, family and neighbors protect one another (GuardianCircle.com). He is also an early pioneer of crypto-currencies, having published two of the first books on Bitcoin: BITCOIN EXPLAINED SIMPLY (2012) and THE CASE FOR BITCOIN (2015). His previous companies include The Palace (*backed by Time Warner, Intel and SoftBank; sold to Communities.com in 1998 with 10 million users*), ZeroDegrees (a business social network sold to InterActiveCorp / IAC in 2004 with 1 million users) and ThisWeekIn (co-founded with Kevin Pollak and Jason Calacanis). He was also the founding CTO of Mahalo / Inside.com (backed by Elon Musk, Sequoia, Mark Cuban and others). Mark also consulted for several years directly for Travis Kalanick, now CEO of Uber, on his first company Red Swoosh. Mark's first book, MAX QUICK: THE POCKET AND THE PENDANT, was published in hardcover and ebook by HarperCollins in May 2011. It was initially

podcast as a series of episodic mp3's and received over 2.5 million downloads. Mark Jeffrey holds a BS in Computer Science from the University of New Hampshire. He is a TEDx speaker and was a featured speaker at the very first Harvard Conference on the Internet and Society.

Hector Rodriguez, Worldwide Health Chief Information Security Officer, Microsoft, leads Microsoft's work in health cloud compliance, health standards, cybersecurity and privacy, and blockchain in health. Hector works to ensure that healthcare security, privacy and compliance are foundational to Microsoft's healthcare digital transformation strategy. His work is aligned with a covered entity's "Triple/Quadruple Aim" objectives to improve the patient and caregiver experience, improve population health and reduce costs.

Hector works extensively with industry and academic groups including WEDI-SNIP, HL/7, AHIP, HIMSS, HITRUST, and CAQH. He is currently a board advisor of the Samueli Institute for health research, a founding member of the HITRUST Business Associate Council. He is also a health industry and cybersecurity curriculum advisor for University of Connecticut and Seton Hall University. Hector is a notable speaker for Microsoft's executive briefing center, partner conferences, and HIMSS on "Cybersecurity and the Trusted Healthcare Cloud" and "Healthcare Digital Transformation". Hector began his career in 1982 as a software engineer at Bell Research Laboratories and has been in the IT business for over 30 years. Hector has an M.B.A. in Management Finance and Entrepreneurship and a B.A. in Computer Science from Rutgers University.

Chris Hafey, Chief Technology Officer NucleusHealth, holds multiple patents in medical informatics and imaging. He is a sought-after speaker and thought leader in both medical imaging and blockchain applications in healthcare. Chris is the primary architect behind NucleusHealth's patented streaming technology for viewing medical images at lightning speed using any modern web browser. Chris led a team that placed second at the 2017 ONC Blockchain in Healthcare Code-a-thon after developing a prototype for sharing of medical imaging using blockchain. Prior to NucleusHealth, Chris served as CTO for OnPoint Medical Diagnostics, Chief Architect at Vital Images, Director of Engineering at Stentor and other leadership roles for many breakthrough technology firms. He has an engineering degree from California State University, Chico.

Ken Brook is a serial entrepreneur and he has built technology companies from the ground up since 2010. His most recent accomplishment is co-founding and serving as CEO of MetaX, the first platform to unlock the blockchain for online advertising - adChain. Most recently, Ken founded and currently still serves as CEO of VidRoll, a video technology and monetization partner for premium content publishers. Previously, Ken started StreamRoll Media, a cross-screen adtech company, in 2013, and earlier in his career held positions in both traditional and digital media. MetaX is a blockchain-based protocol and token factory.

Larry Smarr, the Harry E. Gruber Professor of Computer Science and Information Technologies, joined the University of California, San Diego (UCSD) faculty in 2000 and became the founding director of the California Institute for Telecommunications and Information Technology in December 2000. Prior to UCSD, he was the founder and 15-year director of the National Center for Supercomputing Applications and the National Computational Science Alliance, both based at the University of Illinois, Champaign-Urbana (UIUC). Professor Smarr is a widely-quoted authority on the future of information technology and telecommunications. He is a pioneer in prototyping a national information infrastructure to support academic research, governmental functions, and industrial competitiveness, and played a pivotal role in the development of the Internet and high-performance computing.

Joseph C. Kvedar, MD, Vice President--Partners Connected Health, is creating a new model of healthcare delivery, developing innovative strategies to move care from the hospital or doctor's office into the day-to-day lives of patients. He is the author of *The Internet of Healthy Things*, describing how everyday objects will capture and use real-time biometric data to ultimately change behavior to improve our health. Under Dr. Kvedar's two decades of leadership, Partners Connected Health has launched a number of innovative mobile health programs, virtual care initiatives and clinical research programs for the more than 1.5 million patients served at Partners HealthCare-affiliated hospitals, including Brigham and Women's Hospital and Massachusetts General Hospital, community and specialty hospitals, community health centers, home care and other health-related entities. Partners connected health programs are helping Providers and patients better manage chronic conditions, maintain health and wellness, and improve adherence, engagement and clinical outcomes.

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DISCLAIMER

Nothing herein constitutes an offer to sell, or the solicitation of an offer to buy, any tokens, nor shall there be any offer, solicitation or sale of VIDA tokens in any jurisdiction in which such offer, solicitation or sale would be unlawful. You should carefully read and fully understand this whitepaper and any updates. Every potential token purchaser will be required to undergo an on-boarding process that includes identity verification and certain other documentation, which you should read carefully and understand fully because you will be legally bound. Please make sure to consult with appropriate advisors and others.

This whitepaper describes our current vision for the MintHealth platform. While we intend to attempt to realize this vision, please recognize that it is dependent on quite a number of factors and subject to quite a number of risks. It is entirely possible that the MintHealth platform will never be implemented or adopted, or that only a portion of our vision will be realized. We do not guarantee, represent or warrant any of the statements in this whitepaper, because they are based on our current beliefs, expectations and assumptions, about which there can be no assurance due to various anticipated and unanticipated events that may occur.

Please know that we plan to work hard in seeking to achieve the vision laid out in this white paper, but that you cannot rely on any of it coming true. Blockchain, cryptocurrencies and other aspects of our technology and these markets are in their infancy and will be subject to many challenges, competition and a changing environment. We will try to update our community as things grow and change, but undertake no obligation to do so.

Health Care Legal and Regulatory Considerations

The U.S. health care industry is subject to extensive regulation that will impact the design and implementation of the MintHealth platform. Some of these laws and regulations are described below. Many of these laws and regulations carry the potential for substantial civil and criminal penalties. In addition, users may access the app from international locations, which may implicate international laws and regulations with different requirements than U.S. laws. All of these laws and regulations are subject to change, which may require MintHealth to redesign the platform or otherwise limit platform functionalities. There are no assurances that laws, regulations, and policies as they exist today or in the future will not negatively impact the MintHealth platform and its viability.

Data Privacy and Security

There are federal and state laws, regulations, and policies regarding the privacy and security of health care information, including but not limited to the Health Insurance Portability and Accountability Act (“HIPAA”) and the Federal Trade Commission Act. These laws impose specific requirements and limitations on the use, disclosure, and security of health information. These limitations include, for example, restrictions on the sale of certain types of health information and requirements relating to conducting research activities. There are also special protections and limitations for certain categories of sensitive information, such as mental health information, substance abuse records, information regarding HIV/AIDS status, and genetic information. These protections and limitations may vary from state to state.

Health Care Fraud and Abuse Laws

There are federal and state laws, regulations, and policies regarding arrangements with parties who are in a position to refer patients for health care items and services. For example, the federal Anti-Kickback Statute is a criminal statute that prohibits the offer or exchange of anything of value to induce or reward referrals of items and services that are paid for by a federal health care program (e.g. Medicare, Medicaid, Tricare). Many states have anti-kickback laws that reach services covered by commercial payors and self-pay patients. Federal law also prohibits offering or providing remuneration to a Medicare or Medicaid beneficiary that the offeror knows or should know is likely to influence the beneficiary to obtain items or services from a particular provider or supplier.

Additional Risks

Additional risks are described in other documentation provided by MintHealth, Inc., including the token sale agreement, which you should carefully read and fully understand prior to purchasing tokens because you will be legally bound.