



# PatientMD™

Connecting the Healthcare Community



## WHITE PAPER version 1.0

*PatientMD is an integrated blockchain, mobile and web app platform for information sharing and healthcare services. Our focus is to create a decentralized and distributed global healthcare delivery system that is patient-centric and value-based that provides precision medicine and personalized healthcare.*

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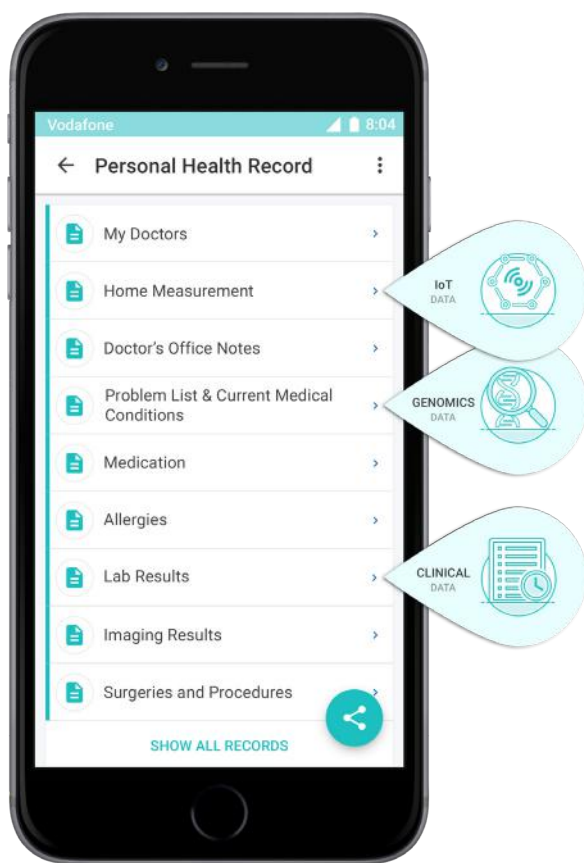
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## 1.0 Abstract

PatientMD is an integrated blockchain, mobile and web app platform for information sharing and healthcare services. Our focus is to create a decentralized and distributed global healthcare delivery system that is patient-centric and value-based while providing precision medicine and personalized healthcare. The foundation of our platform will be the patient's Personal Health Record (PHR), consisting of clinical, genomic and IoT data. The PatientMD PHR will become the complete longitudinal health record of the patient under patient control via the blockchain. Patients will determine which healthcare professionals can have access to their data and how their data can be used by other stakeholders in the industry.

A number of value-added services (including telemedicine, genomic, artificial intelligence and healthcare tourism



**Fig. 1 PatientMD's PHR as viewed from mobile device**

*Image of PatientMD's PHR from the Patient App displaying IoT, genomics and laboratory data added into some of the 37 files composing the PHR.*

services) are being built from the ground up. We expect these will be fully integrated into our platform to transform the industry into a patient-centered and value-based industry providing Precision Medicine and Personalized Healthcare. Open APIs and an SDK will be provided following our Token Distribution Event (TDE) to third party developers for the development of additional services utilizing the permissioned blockchain based PHR. PatientMD's blockchain will be a hybrid platform using the public Ethereum blockchain and the private, permissioned base Hyperledger Fabric.

## 2.0 Letter from CEO

As an Orthopedic surgeon, I have witnessed the continuous waste, inefficiencies and high costs of healthcare making the practice of medicine more and more difficult. Healthcare expenditures continue to rise. A recent article from Journal of the American Medical Association (JAMA)<sup>1</sup> calculates an Affordability Index, a ratio created by dividing the mean cost of an employer-sponsored family health insurance policy by median household income. According to this index, healthcare insurance costs have reached 30.7% of household income. Patients often refuse to seek medical attention or comply with doctor recommendations due to the rising cost of care<sup>2</sup> which can lead to suboptimal patient outcomes.

The lack of a complete patient record at the point of care results in growing inefficiencies, such as duplication of test and medical errors. A recent report out of Johns Hopkins School of Medicine<sup>3</sup> estimates that medical errors in the US have resulted in nearly 250,000 deaths per year, becoming the third leading cause of death behind Heart Disease and Cancer. The adoption of Electronic Health Records (EHRs) has led to a more digital industry. However, we continue to have information silos with limited sharing of patient data amongst healthcare professionals. This contributes to a lack of patient engagement. We have successfully created a more high-tech industry, but we are losing the high-touch aspect of delivering patient care.

Patients and doctors have become more and more frustrated with our current healthcare delivery system. They are overburdened with paperwork, government regulations, and denial of services. This results in limited choices for patients, growing inefficiencies and continued

1 <https://jamanetwork.com/journals/jama/fullarticle/2661699>

2 <https://www.kff.org/health-costs/poll-finding/data-note-americans-challenges-with-health-care-costs/>

3 <https://www.bmj.com/content/353/bmj.i2139>



rising costs. A growing number of doctors are leaving the practice of medicine partly due to current EHRs.<sup>4</sup> This will create a serious problem in our industry and for society since we already have a shortage of doctors, especially primary care physicians. Healthcare has become a payor/provider centric industry and not one that is patient-centric.

It became apparent that to address the problems of this industry, we needed to disrupt the current industry model and make the patient the center of the healthcare industry. Technology would play a major role in this transformational process. This led to my co-founder, Anirban Majumdar, and I to make a significant investment in building our mobile platform over the past two years for information sharing and healthcare services. The advancement of mobile technology, cloud computing, genomics, analytics and Artificial Intelligence (AI) would be important in pursuing our vision for the industry. But the key technology to achieve our vision is blockchain, which allows us to create a trusted decentralized, distributed and democratized industry that gives patients access and control of their data (clinical, IoT and genomic). The use of smart contracts and cryptocurrency on the blockchain allows us to conduct complex transactions in an efficient, secure, private and trusted fashion with the ability to reward and incentivize patients and doctors to deliver the highest cost-efficient care to their patients. This platform can now allow us to achieve our vision for PatientMD.



*Best wishes,  
Dr. Christ Pavlatos MD, MBA  
Founder and CEO of PatientMD*

### 3.0 Executive Summary

PatientMD is a physician-led organization providing an integrated blockchain, mobile and web app platform for information sharing and healthcare services. Our passion is to create a decentralized and distributed global healthcare community that utilizes blockchain technology, smart contracts and cryptocurrency to create an engaged, empowered and incentivized patient.

To accomplish this endeavor, we have built three commercial apps on our platform for the following users: patients, doctors and healthcare businesses to include doctor's practices, hospitals, Pharma, pharmacies, laboratories, imaging facilities, physical therapy, nursing

homes etc. A fourth app was built and to be used internally by PatientMD for our sales and customer support team.

Our "Patient" tokens and smart contracts will play a critical role on our platform. Blockchain technology will be utilized for specific use cases on our platform. One of those use cases is placing the patient's Personal Health Record (PHR) and PatientMD's Electronic Health Record (EHR), to be used by medical professionals, on the blockchain. The patient's PHR will be the foundation of our platform whereby its use will serve as the basis for providing personalized healthcare services to the patient. The PHR will contain the full longitudinal health record of the patient including clinical, Internet of Things (IoT) and genomic data through our genomic sequencing and biomarker identification services available on our platform. The use of Clinical Decision Support (CDS), analytics and Artificial Intelligence (AI) on the PHR data will allow us to create an engaged and empowered patient and doctor in providing Precision Medicine and Personalized Healthcare to the patient.

Once we have an engaged and empowered patient on the services they require for their health and wellbeing, the patient will be able to utilize our healthcare services marketplace for the desired services where we provide price and quality transparency. These services will be provided by the business community through our business app. Purchases can be made via our "Patient" token or fiat cash. As patients become educated consumers on healthcare services, we believe this will foster competition in the industry which results in improved quality at reduced costs.

If in our marketplace, patients do not find a service or find the service to be expensive or of limited quality, they may utilize the healthcare tourism services section of our platform to search for services both domestically and internationally. Our "Patient" token will be of value to patients who pursue international travel for their healthcare services by avoiding the need to acquire the fiat cash of the respective country. Our telemedicine services and the ability for patients to share their PHR with medical professionals allows patients and their respective doctors to conduct pre and post healthcare tourism consultations.

For the doctor community, the sharing and interoperability of patient information, between the PHR and the doctor's Electronic Health Record (EHR), and the care coordination

<sup>4</sup> <http://medicaleconomics.modernmedicine.com/medical-economics/news/physicians-leaving-profession-over-ehrs>



capability within the PatientMD platform will significantly improve doctor's operational efficiencies and address some of the burden of obtaining information from multiple sources and the managing of patient care. To further assist the doctor community, in the future, we plan on providing Revenue Cycle Management Services through the use of smart contracts with the payor community, insurance companies and government. We expect this will improve efficiency with the payment cycle and improve cash flow for doctors.

Smart contracts will also play an important role to the patient community. Patients whose activity promotes good health and wellness may be rewarded or incentivized with our "Patient" tokens through use of smart contracts. Examples of health and wellness behaviour may include: building your PHR with clinical, IoT and genomic data, medication adherence, involvement in care coordination activity, complying with preventative and wellness programs and making value-based purchases of healthcare services. These tokens may be provided to the patient by Pharma, the payor community, insurance companies, employers or by federal and state governments. Patients who receive "Patient" tokens as a reward or incentive via smart contracts may only use the tokens for utilization of healthcare services on our platform.

For businesses, we will offer the ability to market services through our healthcare services marketplace. In addition, the PatientMD's platform provides connectivity between businesses and their customers to lower customer acquisition costs and improve Customer Relationship Management (CRM) services.

PatientMD will be issuing two tokens. A fungible token known as the "Patient" token to be used for access to services on our platform and as a reward/incentive to patients for making healthy behavioural decisions. Doctors may also earn this token for providing patient care based on evidence-based medicine (data-driven) protocols for each individual patient. Our "Patient" token will be available in our crowd sale. Our non-fungible token, known as the "Health" token, is provided to each patient allowing them to control their data for use in academic research centers, pharma and clinical trials whereby they

can be compensated with "Patient" tokens. This allows patients to monetize their own data.

The PatientMD platform will be powered by our "Patient" token. We are issuing 500 million tokens, which will be distributed at a rate of one token to \$0.20 USD in ETH and/ or BTC. We are planning on holding a crowd sale known as a "Token Distribution Event" (TDE, formerly known as "ICO" or Initial Coin Offering") beginning October 1, 2018. See below for further details.

We are currently in the beta phase and have signed up multiple doctors, hospitals and businesses in India. We are to roll out our platform soon in the US. Our plan to release our platform will be October 1, 2018 initially in English speaking countries.

## 4.0 Mission and Vision

### 4.1 Mission Statement

To improve the health and wellbeing of Patients worldwide through our state-of-the-art mobile and blockchain platforms that streamline information sharing and healthcare services.

### 4.2 Vision Statement

PatientMD plans to become the most trusted mobile and blockchain healthcare technology company that leverages technology and economic incentives to:

- Transform healthcare to a Patient-centered value-based industry providing Precision Medicine and Personalized Healthcare
- Create an engaged, empowered and incentivized patient with actionable information in a competitive marketplace with price and quality transparency to improve patient outcomes while reducing costs
- Preserve and strengthen the relationship between patient/doctor



## 5.0 Transformation to tomorrow's healthcare

The current healthcare delivery system is not sustainable. It is fraught with a number of problems which PatientMD is focused to address.

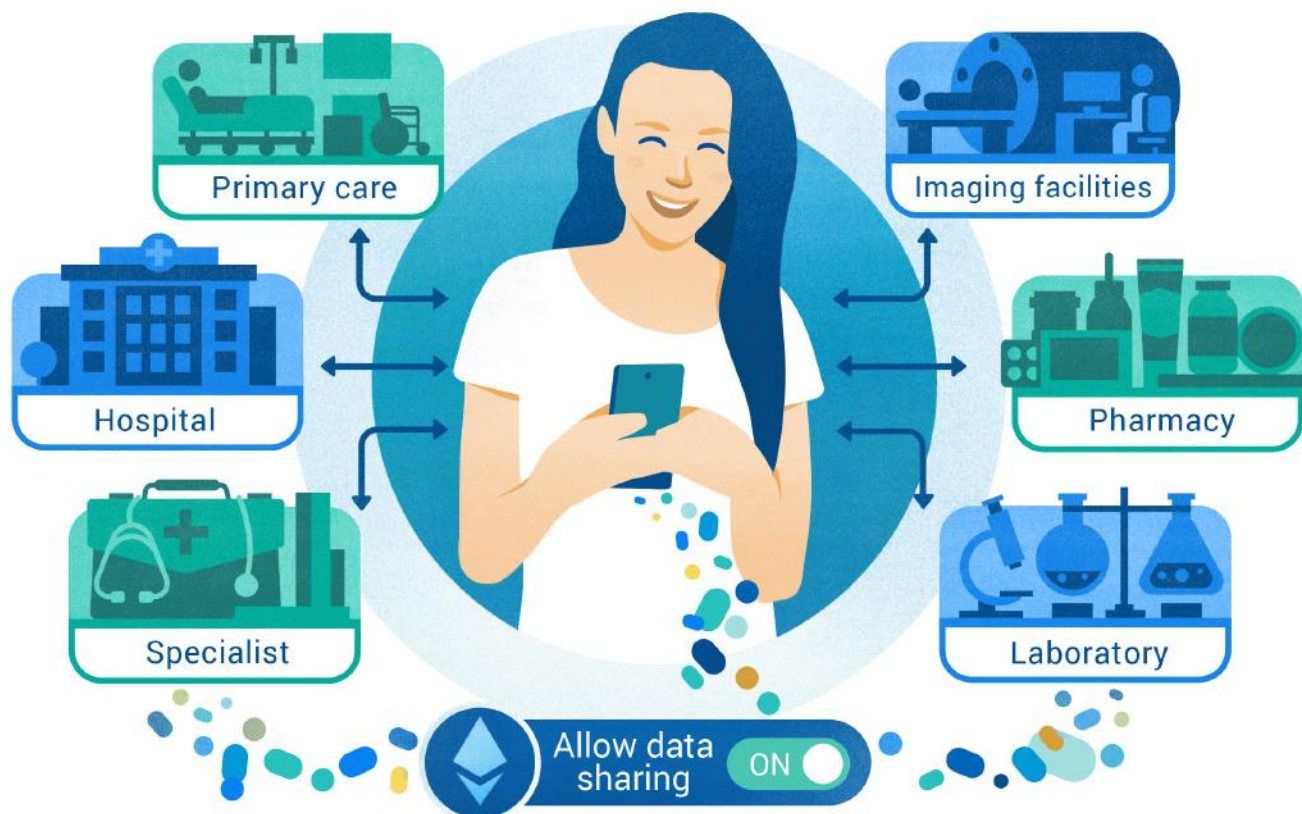
### 5.1 Inefficiencies in today's fragmented system

The lack of information sharing continues to result in the inability to coordinate care amongst doctors and healthcare institutions. Almost 75% of healthcare expenses are spent by patients with chronic disease.<sup>5</sup> These patients often have anywhere from 1-5 or more medical conditions.<sup>6</sup> These patients are often treated by

several doctors located at different hospitals and different doctor practices. Patients have become frustrated having to give the same demographic and insurance information to every facility they visit. Decisions are often made without a complete patient clinical record. This can lead to duplication of tests, reduced quality of care and increase medical errors. A complete PHR that contains the integration of clinical, genomic and IoT data is lacking. This affects the ability for doctors to provide precise and personalized care.

#### 5.1.1 PatientMD's transformational solution for information sharing and care coordination

The PatientMD platform provides a PHR utilizing the Fast Health Interoperability Resources (FHIR) protocol. FHIR is



**Fig. 2 PatientMD Data Sharing Ecosystem**

Data from medical stakeholders are synchronized in the patient's PHR. In this figure, the patient decides to share data from the laboratory with the medical specialist. Patients have full access and control of their data and decide how data can be used. Sharing of information between stakeholders is controlled by the patient using smart contracts.

5 <https://www.cdc.gov/chronicdisease/overview/index.htm>

6 <https://www.rand.org/blog/rand-review/2017/07/chronic-conditions-in-america-price-and-prevalence.html>



an interoperability standard developed by the healthcare IT standards body known as HL7. FHIR is attractive primarily because it is based on a truly modern web services approach.<sup>7</sup> With our PHR, patients have full access and control of their data. They can decide with whom to share their data and how it can be used.

The PatientMD platform has been built to not only integrate clinical data from multiple healthcare professionals and institutions but to integrate IoT data and genomic data. Patient Generated Data (PGD) and IoT data from wearables, medical devices, healthcare apps are growing and carry the potential to play a significant role in improving outcomes and lowering costs while assisting doctors in effectively tailoring treatment protocols. In fact, it is projected “within five years, the majority of clinically relevant data will be collected outside of the clinical settings”.<sup>8</sup>

Our platform also provides genomic sequencing services and the computational capability to perform bio-marker identification, interactions and variance models. The merging of all this data provides a complete patient record for the patient and their doctor. We can utilize CDS, Analytics and AI with the complete PHR to educate the patient and their doctor on Precision Medicine and Personalized Healthcare. Providing patients actionable information on healthcare services leads to an engaged and educated patient. Patient engagement is critical to transforming the industry. Studies have shown that the best way to improve patient outcome at a reduced cost is to increase patient engagement.<sup>9</sup> Current efforts to provide patients with their clinical data have created limited patient engagement since they lack the knowledge on how to best utilize their data to manage their health and wellbeing.

For care coordination purposes, PatientMD is developing specific “care modules” based on their medical conditions. Patients assign the doctors from the PatientMD community into these care modules for each specific medical condition. Data from each of the assigned doctors are organized in chronological order for patients and treating doctors to clearly see the coordination of care across practices and institutions. This method is extremely advantageous to health care providers since they do not have to search a voluminous amount of data for each medical condition. In addition, we anticipate patients will be incentivized via our

“Patient” token by the payor community which includes the insurance companies, government and self-insured employers. This reward/incentive can be for such activities as collecting all their data (clinical, genomic and IoT data), engaging in care coordination activity and complying with prevention and wellness protocols. Any “Patient” tokens, earned through a reward and/or incentive will be provided to the patient by a smart contract and can only be used for additional services on our platform. This incentivization further engages the patient and allows us to “gamify” our platform to foster improving quality of care at a reduced cost.

Patient data, especially when genomic data is included, can exceed over 80 GB of storage. Currently, blockchain technology is not capable of handling this amount of data. Therefore, some of the PHR data will be on the chain and most of the data will be off the chain with pointers to where the data can be found off the chain. Most of the on-chain information will include data frequently used in patient care such as: Problem lists, medications, allergies, immunizations, procedures, discharge summaries, emergency room reports, laboratory and imaging reports to name a few.

As blockchain capability to handle more data increases, we expect more structured data will be available on the chain. In summary a blockchain enabled health information exchange provides the trust, transparency, immutability, privacy and security for access to patient data. This can provide the industry longitudinal views of a patient’s health which provides the capability for new insights about population health, if patient permission has been given, while supporting precision medicine and value-based care.

## 5.2 Rising cost of care and the inability to perform value-based purchasing

In the US alone, healthcare expenditures are approaching \$3.3 trillion, nearly 18% Gross Domestic Product (GDP).<sup>10</sup> Patients are paying for more and more of their own healthcare expenses through higher deductibles and rising premiums. This leads to reduced utilization of healthcare services, affecting the overall ability to improve health and the wellbeing of the patient. To further complicate matters,

7 <https://www.hl7.org/fhir/overview.html>

8 <https://www2.deloitte.com/insights/us/en/focus/internet-of-things/iot-in-health-care-industry.html>

9 <http://www.nejm.org/doi/full/10.1056/NEJMp1209500>

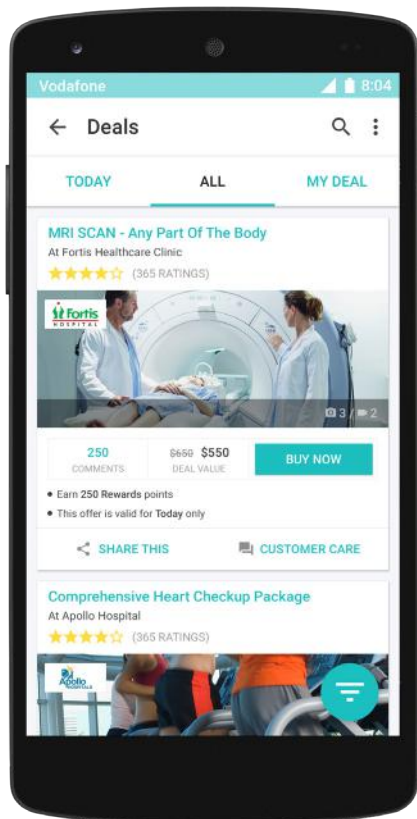
10 <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsHistorical.html>





there is a lack of price and quality transparency. This limits value-based purchasing. The lack of transparency reduces competition leading to higher costs as patients are not able to make value-based and informed purchases.

### 5.2.1 A transformational solution for value-based purchasing



**Fig. 3 PatientMD Deals**

*The Healthcare Services section of the Patient App displaying all “Deals” with ability to view Today’s Deals and Deals purchased.*

As PatientMD creates an engaged, empowered and incentivized patient, we will provide a healthcare services marketplace with price and quality transparency in an “Amazon-like” experience. Businesses can utilize their app to post services which includes information on the business and the service, images and/or videos along with pricing and reviews from patients who have utilized the service from the specific provider. Patients will be able to search for the services they desire based on price and

quality, which increases the value of the purchase to the patient. This activity creates the market forces to improve quality at a reduced cost.

Once patients identify a service they like, they may make a purchase with a “Patient” token, fiat cash or just schedule the service on line if their deductible has been met from their insurance provider since billing will be submitted to their insurance provider, who will calculate the patient’s obligation. If the service is a Telemedicine service, patients can also schedule the service via our mobile or web app, if the chosen provider is not immediately available. Through the PatientMD doctor app, doctors will be able to provide to both existing and new patients appointment scheduling for either clinic and/or telemedicine visits. Both clinic and telemedicine appointments are integrated into a single schedule for the doctor via our app. Telemedicine is an \$18 billion industry expected to be \$41 billion by 2021.<sup>11</sup>

If a patient cannot find the service they need (as is often is the case in rural or underserved areas), patients can utilize PatientMD’s healthcare tourism section. Here, patients can search both domestically and/or internationally for the service through our healthcare tourism section within our patient app or the web app. Decisions can be made based on the price and quality of a service.

To improve the experience for the patient, they are able to share their PHR and conduct a telemedicine visit with the healthcare service professional prior to leaving for their destination. This greatly assists the patient and doctor to determine if the patient is a good candidate for the service. Once the service has been performed, post-services visits can be conducted via telemedicine with the sharing of the doctor’s EHR with the patient’s PHR. The advantage of this service is for continuity of care as well as for the distant providers to be able to share the patient’s data with the local primary care doctor of the patient through the sharable PHR. This exposes the services provided by a medical professional from a distant location to the local primary care providers.

We currently are not aware of any healthcare tourism company that is able to provide this service to the patient and doctors. An additional benefit to patients is to utilize these services with the use of our “Patient” token avoiding the need to convert their fiat cash to the fiat cash of the country they are visiting.

<sup>11</sup> <https://www.statista.com/statistics/671374/global-telemedicine-market-size/>



Global Healthcare tourism is a \$61 billion industry growing at CAGR 15% projected to reach \$165 billion by 2023.<sup>12</sup> In the near future, PatientMD will utilize analytics and AI to assist patients in suggested “packages of services” to manage their health and wellness based on value. Many of the services offered in healthcare tourism packages are less expensive with comparable quality. We believe this provides the opportunity to reward and/or incentivize the patient with the “Patient” tokens by the payor community for making value-based decisions. In our application, a patient will be informed through our terms of service policy that all information and suggested services are to be used in consultation with their doctor on how best to proceed in the management of the patient’s healthcare.

### 5.3 Inefficient Revenue Cycle Management

In the US, we have been speaking of the triple aim in healthcare: enhancing the patient experience, improving population health, and reducing costs. We now address the quadruple aim in healthcare which includes the work life of the healthcare provider.<sup>13</sup> We are seeing a growing number of doctors who are leaving the practice of medicine due to the complexity of running their practice and frustration with current EHRs. PatientMD’s solutions provide the opportunity to improve patient care, operational efficiency and time savings for providers. However, the complexity in revenue cycle management which deals with eligibility, authorizations, deductibles, pre-certification and claims payment has been very costly and time consuming to doctor’s practices. An article by the Commonwealth Fund estimates that administrative costs in the US due to insurance transactions are \$83,000 per doctor per year.<sup>14</sup> This has a severe adverse effect on a practice’s cash flow, profitability and sustainability. This administrative complexity represents 9% of healthcare spending. In the US, alone, this costs the system over \$300 Billion.

#### 5.3.1 Revenue Cycle Management Services (RCMS)

At PatientMD, we anticipate that market forces to reduce administrative costs will continue to grow. This provides us an opportunity to implement PatientMD’s RCMS to

address insurance eligibility, pre-authorizations, pre-certifications and claims processing workflows while reducing transactional costs with the use of blockchain and smart contracts. We plan on building and implementing this service as we increase market penetration of our platform for information sharing and healthcare services. Implementation of our RCMS requires building up patients PHRs and its interoperability with the doctors EHRs. As our network grows, this will increase our ability to work with the insurance companies. Blockchain creates the “distributed trust” to conduct these transactions with the use of smart contracts in an efficient, transparent fashion with reduced human intervention. We believe the administrative complexity can be significantly reduced and improve doctor’s cash flow, profitability and sustainability as a business.

### 5.4 Integration and big data problems with IoT

Home healthcare devices and sensors are becoming more and more popular. This currently represents a \$6.22 billion industry with a CAGR of 18%, projected to grow to \$14.41 billion by 2022<sup>15</sup> This growth is driven by technology advances in medical devices, the penetration of smartphones, the number of healthcare apps and the increased awareness of physical fitness. These devices provide valuable information such as: weight gain to monitor obesity or congestive heart failure, blood glucose levels for diabetes, pulmonary function tests and oxygen saturation for monitoring asthma and chronic obstructive pulmonary disease, activity level for cardiac, pulmonary and diabetic control, etc. The ability to capture this information into a patient’s PHR and then share with the doctor’s EHR is currently limited.

12 [www.alliedmarketresearch.com/medical-tourism-market](http://www.alliedmarketresearch.com/medical-tourism-market)

13 <http://www.annfamned.org/content/12/6/573.full>

14 <http://www.commonwealthfund.org/publications/press-releases/2011/aug/physician-practices-and-administrative-costs>

15 <https://www.prnewswire.com/news-releases/wearable-medical-devices-market-183-cagr-to-2022-671086643.html>



### 5.4.1 PatientMD’s solution to IoT and big data

PatientMD’s platform has been architected to capture this valuable information which is added to the patient’s PHR and shared with their doctors. This information can be used to monitor a patient’s health from home and intervene early in their care if necessary, expanding the implementation of the patient-centered medical home model. The medical home, also known as the patient-centered medical home (PCMH), is a team-based health care delivery model led by a health care provider to provide comprehensive and continuous medical care to patients with a goal to further improve health outcomes.

Patients are generally seen four to six times per year by their physicians, who therefore provide mostly episodic care. If medical professionals can monitor a patient’s health from home through IoT devices, they can more effectively manage patient care by intervening early when abnormal results are seen. This may reduce emergency room visits, hospital admissions and eventually healthcare costs.

We anticipate patients will be able to earn “Patient” tokens with use of this service. For example: a patient with diabetes purchases a fit bit, pedometer and/or other digital devices to monitor their activity level and weight.

A smart contract created by the payor community can issue “Patient” tokens as the patient’s activity level increases with a corresponding reduction in weight, blood glucose and Hemoglobin A1C levels. With this positive health behaviour exhibited by the patient, as documented by a reduction in weight, increased activity and improved laboratory results used in diabetic care, patients may earn “Patient” tokens as a reward which can be used for additional services on our platform that further improves patient care.

We believe this is just one example of how patients can earn “Patient” tokens. The use of positive health behaviour by patients to earn tokens can also apply to hypertension, asthma, congestive heart failure, obesity, COPD etc. Insurance companies, along with medical societies, may establish data requirements for patients to earn our “Patient” token through the use of smart contracts. Once a contract has been fully executed, the insurance company may directly deposit earned tokens into the patient’s digital wallet. As the PatientMD community and network grow, we will plan on establishing relationships with the employer and payor community (insurance companies, federal and state governments) to promote incentivizing patients for positive health behaviour.



**Fig. 4 Devices Talk to PHR then Smart Contracts Reward Desired Outcomes**

*In this figure, the patient’s weight loss and data from her fit bit device (IoT) along with laboratory data are added to her patient controlled PHR. The PatientMD token ecosystem rewards and incentivizes patients for behavioural improvements, both medical and economical. Important wellness milestones in this diabetic patient, measured by laboratory glucose and hemoglobin A1C levels, can result in the patient receiving “Patient” tokens as rewards from stakeholders featured on the right, which are added to a patient’s digital wallet.*



## 5.5 Limited use of genomic data

Current use of genomic data in patient care is limited but growing. Currently, integration and manipulation of diverse genomic data and comprehensive electronic health records (EHRs) on a Big Data infrastructure exhibit challenges.<sup>16</sup> In addition to the technical aspects that need to be addressed, patient privacy and data security must be strictly protected.

### 5.5.1 PatientMD's genomic sequencing and bio-marker identification services

On the PatientMD platform, we offer genomic sequencing services. Once the sequencing is completed, PatientMD has developed the computational capability to perform bio-marker identification for various diseases including heart disease and cancer. Because genomic data is so large and complex, the use of our PHR built on FHIR

allows us to extract from a repository the bits of data that are required to be utilized by the PHR and/or the EHR of the doctor.<sup>17</sup> With interoperability between our PHR and doctor's EHRs, we can utilize CDS and analytics. AI can also be used with our comprehensive PHR to suggest Precision Medicine and Personalized Healthcare services to the patient and their doctor. Patients and doctors may be able to earn "Patient" tokens from the payor community to incentivize patients to obtain their genetic information and implement preventative and wellness services. This will further engage the patient and "gamify" our platform for both parties.

## 5.6 Limited use of artificial intelligence

Currently, we see limited use of artificial intelligence integrated into clinical practice and patient care. We expect this to grow significantly in the future.



**Fig. 5 Genomic Testing Results Added to PHR then Shared with Doctor**

*The PatientMD platform includes genomic sequencing and bio-marker identification. The results can be entered in the patient's PHR via their mobile phone. The patient is able to share the results with their doctor's EHR, using smart contracts to control access granularly. With this genomic data, along with clinical and IoT data, the patient's doctors will be able to provide Precision Medicine and Personalized Healthcare services to the patient.*

<sup>16</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5343946/>

<sup>17</sup> <https://healthitanalytics.com/news/fhir-can-move-genomics-from-prediction-to-precision-medicine>



### 5.6.1 PatientMD's use of Artificial Intelligence

Our initial use of AI will be for image recognition especially in dermatologic lesions. Patients and/or doctors will be able to take a picture of a lesion and we will determine the likely diagnosis and the likelihood of cancer. Patients may utilize our telemedicine service and share the image with a local dermatologist to expedite diagnosis, possible biopsy and treatment. We plan on extending AI Image recognition to radiology and pathology specialties. Additional AI services in the future may include: preliminary diagnosis, administrative workflow assistant and use in clinical trials participation identifier. Accenture projects these areas for AI will be a \$40 billion industry in the next 5 years.<sup>18</sup>

PatientMD is currently developing an AI chatbot called "Sylvie" for educating patients, doctors and businesses on

how to use our app. Voice activated commands for further ease of use of our platform and apps will follow.

### 5.7 Difficulties with searching for healthcare services outside a local area

It has been said that 90% of healthcare services are performed locally. It serves patients well when there are numerous and advanced healthcare facilities in one's local market. In many areas of the world, the type of healthcare services available may be limited. Those requiring specialty care often have a difficult time searching for specific services. If specialty services are available, there may be few facilities providing the service. The lack of competition supports higher prices.



**Fig. 6 Use of AI Image Recognition for Virtual Dermatology**

*This figure illustrates the sequence of an AI image recognition service. In the upper left, a patient starts by taking a picture of a skin lesion. Using their mobile phone, the patient can have a lesion analyzed. A provisional diagnosis and likelihood for cancer is provided with the recommendation to consult with their doctor. The patient can search for a local dermatologist on the PatientMD network and conduct a telemedicine consult while sharing the image and the report. The doctor recommends a biopsy which the patient schedules in the PatientMD scheduling module. A definitive diagnosis is made and the doctor is rewarded with Patient tokens for uploading metadata to PatientMD's AI service.*

<sup>18</sup> <https://www.accenture.com/us-en/insight-artificial-intelligence-healthcare>



### 5.7.1 PatientMD Healthcare Tourism

To improve patient's ability to find specific healthcare services outside of one's market and foster price competition, we provide Healthcare Tourism which provides services, outside of one's locality, both domestically and internationally. We plan on leveraging our broad market penetration to provide the best price for the patient and their family. We believe in underserved areas and third world countries where healthcare specialty services are limited, international healthcare tourism will be a highly valuable feature on our platform for these users. For patients in developed countries where specialty services are more available, we expect domestic healthcare tourism will be more popular for price and quality comparative purposes.

## 5.8 Difficulty in patient recruitment for clinical trials and academic research

Recruitment of patients for clinical trials is a costly and timely process. One study indicated that in 2013 the total cost for all clinical trial recruitment was \$6.252 billion, with \$4.118 of the \$6.252 billion representing unproductive costs from patients who did not qualify or dropped out of the clinical trial.<sup>19</sup> In another report, the total time spent on patient recruitment was 30 months representing 30% of the total clinical trial process.<sup>20</sup> Other disturbing statistics show that: up to 85% of clinical trials are delayed due to enrollment, 80% of clinical trials fail to meet their enrollment timelines and up to 50% of research sites enroll one or no patients.<sup>21</sup> The patent life for drugs from the time of discovery is 17 years. The longer the clinical trial process, the shorter the patent life of the drug when it hits the market leading to significant loss of revenue for Pharma.

### 5.8.1 PatientMD solution to clinical trials and academic research centers

PatientMD's contribution to the clinical trial and academic research process is twofold: 1. Allow patients to monetize their data. 2. Improve patient recruitment for clinical trials to expedite the clinical trial process and provide an easy solution for academic centers to locate patients and obtain clinical data for their research. Each patient user on our platform will be provided with a non-fungible token, known as the "Health" token, which can be used to control access to

their data for research and clinical trial purposes.

We like to coin this process as "mining one's health". Pharma and academic centers can run operating models for their clinical trials and research on our platform, respectively. Patients who qualify will be notified if they wish to participate. Those that do will have their clinical data utilized on the various operating models. Although their data is utilized, it is not disclosed or provided to pharma or the research centers unless authorized. This secures the privacy of their data while still being able to monetize their data. Patients will receive compensation in the form of our utility "Patient" token via a smart contract. Patients who have a significant amount of clinical, IoT and genomic data may receive greater compensation than patients who have only clinical data in their PHR. This serves as an incentive to patients to gather their clinical, IoT and genomic data into their PHR.

## 5.9 Increasing security threats for patient clinical data

One of the major concerns in the healthcare industry is not only the privacy but the security of patient data. Patient data is currently more valuable in the black market than financial data.<sup>22</sup> For this reason, the healthcare industry is the number one industry for hackers. Currently, EHRs from the provider community are stored in centralized databases. In addition to relying on "trust" to a single authority, centralized databases cannot ensure the security and integrity of patient data. Recently, we have been seeing an increase in "ransomware" attacks on the provider community. Hospital and large physician organizations are forced to pay these hackers for access their data which may have been compromised.

### 5.9.1 PatientMD solution to security

Privacy and security of patient data are of utmost importance to PatientMD. The foundation of our platform is the PHR of the patient that contains their entire longitudinal health record. Placing limited but critical data in the PHR resting on the blockchain provides the cryptographic security required to protect a patient's data. A dual method of authentication will further improve the security of the data. For decentralized identity management services, we are currently looking at several of the leading firms in the market.

19 <https://www.pivotalfinancialconsulting.com/single-post/2016/12/09/Patient-Recruitment-Clinical-Researchs-White-Whale>

20 [https://vitaltransformation.com/wp-content/uploads/2014/10/DGS\\_17-10-Opt-in-Opt-out-Patient-Led-Databases-MAPPs-DG3.pdf](https://vitaltransformation.com/wp-content/uploads/2014/10/DGS_17-10-Opt-in-Opt-out-Patient-Led-Databases-MAPPs-DG3.pdf)

21 <https://www.pivotalfinancialconsulting.com/single-post/2016/12/09/Patient-Recruitment-Clinical-Researchs-White-Whale>

22 <https://www.forbes.com/sites/mariyayao/2017/04/14/your-electronic-medical-records-can-be-worth-1000-to-hackers/#6ae298f450cf>

## 6.0 Our Platform

The PatientMD platform was built with several objectives in mind:

- 1.** Create an engaged and **empowered patient**.
- 2.** **Reward and/or incentivize** patients through the use of our “Patient” token when good health behaviour is displayed and/or value-based decisions are made for their health and wellbeing.
- 3.** Provide patients with their services via **mobile technology**.
- 4.** Connect patient with their doctors and businesses by **providing incentives** for each user.
- 5.** Connect the entire healthcare community to **improve the patient experience** and efficiency in purchasing and utilizing healthcare services.
- 6.** Ensure access and control of the patient’s data by the patient along with the **privacy and security** of their data.

Development of our platform began over two years ago. We have built three commercial Apps on our platform for: patients, doctors and businesses.

A fourth app is to be used internally by PatientMD for our sales and customer support team.





# Patient App

## 1. Healthcare Services

- **Genomics** – genetic sequencing and bio-marker identification
- **Healthcare Tourism** – domestic and international services
- **Appointment Scheduling** – both clinic and telemedicine
- **Telemedicine services**
- **Healthcare Services Marketplace (Deals)**
- **PHR** – built on the permissioned blockchain
- **Messaging** – with multiple doctors and healthcare organization

## 2. Community Health Network

- **Community** – our social media platform connecting patients and doctors across the world on topics of interest to each party for sharing information and educating patients. Private chats are available.
- **Educational Videos** – our “medical you tube”. Videos from doctors, hospitals, pharma, medical device companies etc. where patients can earn “Patient” tokens. Videos provided to patients based on medical conditions and topics of interest.
- **Ask our doctors** – patients can submit questions to doctors in the PatientMD community based on any topic or directed to a specialty.
- **News** – provides news based on topic, leading medical institutions and the latest medical news. Article summarized using Natural Language Processing (NLP) and AI. Entire article may be viewed if interested.
- **Notifications** – from community and ask our doctors sections.



In the **Community Health Network**, patients are anonymous and recognized only by their handle names.

**Fig. 7 Telemedicine Services on the Patient App**

*Telemedicine consult from the Patient App with the ability to share their PHR and chat with the doctor if voice communication is difficult.*





# Doctor App

## 1. Patient Care Network

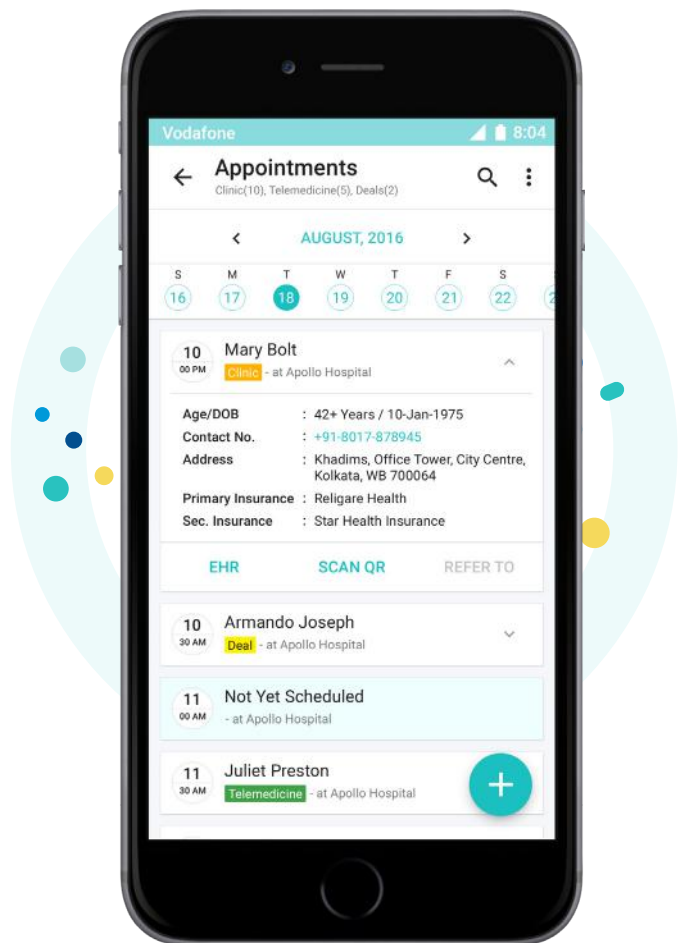
- **Appointments** – both clinic and telemedicine. Can interface with doctor's current EHR if desired
- **Telemedicine** – may be scheduled, asynchronous communication via text, audio and/or video, or live "online" consults
- **EHR** – can share information with doctors' existing EHR or serve as a basic EHR for doctors in remote or underserved regions without any EHRs
- **Messages** – from patients or doctors within the PatientMD community
- **Reminders** – provided to patients within 24 hours on upcoming appointments through our messaging service
- **Referrals** – to be built on the blockchain for referral management
- **Care Coordination** – module built around coordinating patient care with other healthcare professionals built on the blockchain (under development)
- **Healthcare Services Marketplace (Deals)** – for services to doctors only

## 2. Community Health Network

- **Community** – connect with patients and doctors in conversations on topics of interest
- **Doctor Network** – a social media platform for doctors only. Doctors connected based on topics of interest and/or specialty
- **Educational Videos** – includes videos targeted to doctors from Pharma, medical device companies etc.
- **Ask our Doctors** – may respond to questions submitted by patients
- **News** - provides news based on topic, leading medical institutions and the latest medical news. Articles are summarized using Natural Language Processing (NLP) and AI. Entire article may be viewed if interested. In the future, we plan to provide articles from medical journals for doctors who have subscribed to these journals, with the ability to earn Continued Medical Education (CME) credits in the future
- **Notifications** – from community, ask our doctors and doctor network sections

## 3. Business App

- **Healthcare Services (Deals)** – ability for businesses to create deals, view current deals, re-submit expired deals and view analytics on effectiveness in the posted deals section
- **Videos** – Create educational Videos for patients and/or doctors
- **Chat on Deals** – communicate with existing customers
- **Appointment Schedule** – limited only to doctor's practices when logged in as a business. Allows doctors to establish their clinic and telemedicine schedules
- **Notifications** – from customers regarding deals/ healthcare services



**Fig. 8 Appointments on the Doctor App**

*Consolidated appointment schedule section from the Doctor App displaying the type of appointments, clinic, telemedicine or purchased appointments as a Deal.*



As we provide a number of services for various users, we anticipate the development community to contribute with additional services. APIs and SDKs will be provided following our Token Distribution Event to allow the development community to build additional services or complimentary services on our platform. We believe we all wish to contribute to the disruption and transformation of our healthcare delivery system. Providing APIs and SDKs opens up our platform to many individuals who wish to contribute to the PatientMD community.

Within a year following our Token Distribution Event, we plan on creating a PatientMD foundation. This nonprofit organization will provide direct peer to peer donation of Patient tokens via smart contracts between philanthropist and philanthropic organizations to patients eliminating most administrative costs. Donations can be directed to patients based on a number of criteria: age, sex, location, medical conditions, socio-economic status etc. All token received by patients can only be utilized for healthcare services on the PatientMD platform.

## 7.0 Our Strategy

From the day that PatientMD was conceived, our objective has been to improve the health and wellness of the patient in the most cost-efficient manner that exceeds their expectations. In order to accomplish this task, patient engagement is crucial. Currently, providing patients with a “digital filing cabinet” of their clinical data limits patient engagement. Patients wish to remain healthy and never see a doctor except for preventative care. Therefore, to maximize patient engagement, patients not only wish for access and control of their entire medical record but desire to be provided with actionable information and the necessary features to search, purchase, receive and/or schedule services to manage their health and wellness.

We believe these features need to be provided via mobile technology in a simple and intuitive fashion. This strategy led to the development of our integrated blockchain, mobile and web app platform for information sharing and healthcare services. Third, patient engagement can be further maximized by providing rewards and incentives via our “Patient” token which “gamifies” our platform.

A similar strategy is required for the doctor and business community. Our objective was to align incentives in the

PatientMD community that would result in engaging all users in our community. For doctors, we wish to address three of their interests: improve patient care, save time through operational efficiency and increase growth opportunities for their practice. A necessary component to meet these needs of the doctor community requires their ability to engage with patients, specifically through mobile technology.

Currently, doctors lack a true mobile strategy. In addition, most doctors do not have the resources or capability to develop a comprehensive mobile strategy. PatientMD’s mobile platform was built to meet the needs of the doctor community. Our state of the art technology and all its services provide doctors with a simple and intuitive means to engage with their current and new patients using mobile technology. This addresses the three areas of interest mentioned above.

For businesses, PatientMD addresses several of these interests, including marketing of services, lowering customer acquisition costs, increasing revenue capability and providing mobile Customer Relationship Management (CRM) services. PatientMD’s mobile platform effectively addresses the needs of the business community with the services in the business app.

Another benefit to the business community that we plan to offer, specifically for doctor’s practices, hospitals and insurance companies, is the credentialing process for doctors. The process for doctors to become credentialed is cumbersome. It can take months for a doctor to become credentialed with a new hospital or insurance plan. Using blockchain technology to verify identity, education, training and board certification can drastically reduce the time and human resource required in the current credentialing process.

As important as it is to build a platform delivering all these services to achieve our vision, it is equally important that an organization develop a solid business model around these services. We all wish to see blockchain, smart contracts and crypto currency disrupt and transform industries across the world. However, without a solid business model, this is not possible. At PatientMD, we have a solid subscription and transaction business model built into our platform to grow and be an on-going concern to effectively implement globally blockchain technology along with smart contracts and our token.



## 8.0 Technical Infrastructure

PatientMD uses both on-chain and off-chain architecture to manage its resources and services. All of its off-chain services include cloud-based services on REST protocol. Multi-factor authentication and authorization realms are built for security using partial cookie and token architecture. At the lowest level, the patient health records based on FHIR protocol will be further secured by PKI encryption followed by sharding the encrypted records across multiple database instances to be combined later on by shard locator service. This prevents single site hack attacks.

Patients will control granular access to their PHR data via cryptography. The entire PHR data is not stored on the blockchain directly. However, the PHR data is sealed where we record the hash of the record on the blockchain. This allows us to know if the seal is broken. This along with shard locator service provides fool-proof security to PHR.

A portion of patient health data can reside as a part of EHR

record in silos across different institutions. Some of these institutions can be part of the PatientMD permissioned blockchain and thus they will be able to share PHR data via smart contracts using off-chain channels while others will share using Direct Access, Blue Button Plus or similar channels. When a block of data is generated to be inserted into the PHR, the data is first divided into key and value pairs. The value part of the pair is encrypted with a randomly generated key. An index is also generated with each block and key.

If the data is generated by the doctor, the combination of index and encrypted blocks is signed by the doctor with their private key to ensure that the data cannot be tampered with. The signature of record is stored in the blockchain to keep an immutable record of the entry. Finally, the entire entry is encrypted with a random entry key and the key is sent to the user encrypted with their public key, ensuring that only the user can read it. This system thus enables the user access permissions by sharing either the entry key or any of the block keys, allowing the decryption of only the chosen data.

**Health token**

*Health Token With a non-fungible "Health" token in a digital wallet, patient controls the access and utilization of their data, via smart contracts, with various stakeholders in the token economy ecosystem.*

**Patient token**

*Patients are compensated with a fungible "Patient" tokens. They receive "Patient" tokens via smart contracts as a reward and/or incentive for complying with Evidence Based Medicine (EBM) protocols, medication adherence, care coordination, complying with prevention and wellness protocols, to name a few.*



**Fig. 9 The PatientMD Token Economy Ecosystem**

*This figure depicts the PatientMD token Ecosystem with the blockchain PHR being a centerpiece. The PHR contains all clinical, genomic and IoT data generated by the patient. With the "Health" token, the patient allows Pharma, academic centers and clinical trials to use their data for computational purposes. Patients are rewarded with "Patient" tokens via smart contracts for use of their data. Access to their personal details and medical record remains safeguarded. A Patient may also receive "Patient" tokens as a reward and/or incentive via smart contracts for complying with Evidence Based Medicine (EBM) protocols, medication adherence, care coordination and preventative and wellness protocols, to name a few. The lower right figure depicts the stakeholders that may reward and/or incentivize a patient with "Patient" tokens via smart contracts for displaying the desired behavior, both medically and economically.*



## 9.0 Token Economy

PatientMD will issue two types of tokens, a fungible token compliant with the ERC223 standard and a non-fungible token compliant with ERC721 standards. The fungible token will be called the “Patient” token. The non-fungible token will be called the “Health” token. Unlike the fungible token which has a fixed supply, a non-fungible “Health” token is minted every time a patient joins PatientMD and is not transferable.

Our utility “Patient” token will be utilized for services on the PatientMD platform. Patients will be able to purchase or earn Patient tokens through rewards and incentive programs. Although services can also be purchased via fiat cash, we believe services will be available at a lower price through the Patient token due to reduced market friction costs with use of the blockchain. Tokens earned by patients can be for a number of healthy behavioural activities, such as: building their PHR with clinical, genomic and IoT data, medication adherence, referral and care coordination compliance, adopting prevention and wellness services, becoming a true consumer by “shopping” for healthcare services, viewing educational videos, and by participating in clinical trials and/or academic research activity etc.

Our “Health” token is a non-fungible and non-transferrable token provided to every patient user on our platform. This token will serve as a means for patients to control access to their data for clinical trials and academic research activity.

### Salient features of “Patient” Token

#### Self-Governance

- No undue founder influence after launch – autonomously governed by smart contracts
- Resistant to individual or community discord, disagreement or misinterpretation
- 100% on-chain, decentralized, auditable

#### Portability

- Cross-blockchain portability allows provable export to, and import from, different contracts or different chains
- Further protects the cryptocurrency from governance issues and instability

- Community development of new chain export and import functionalities
- Enables a migration path to future blockchains as the ledger technology platform matures

Our “Health” token is a non-fungible and non-transferrable token provided to every patient user on our platform. This token will serve as a means for patients to control access to their data for clinical trials and academic research activity.

### Salient features of Health Token

**Access Control:** Only the token holder identified as “Patient” will have the access and control. This smart contract will allow only the patient to access his or her information. There will be functions called “Only Patient” which will only allow the patient the role to execute models on patient data.

**Health Auction:** The patient needs to be paid to participate in genomic, pharma, clinical trials and AI models on patient data. Before deploying a model, the model deployer i.e., bioinformatics researchers at Pharmaceutical companies, Government health agencies, academic centers etc. will conduct an auction to compensate the patients via our ERC223 fungible i.e. “Patient” token. The patients who participate in the auction will allow these models to run on patient data.

Auction allows “price discovery” of analytics and model parameters of patient data for use in clinical trials, drug discovery and precision medicine protocols. The beauty of this process is that the “patient data” is not shared with anybody and patients gets compensated over and over again for lending their data to models.

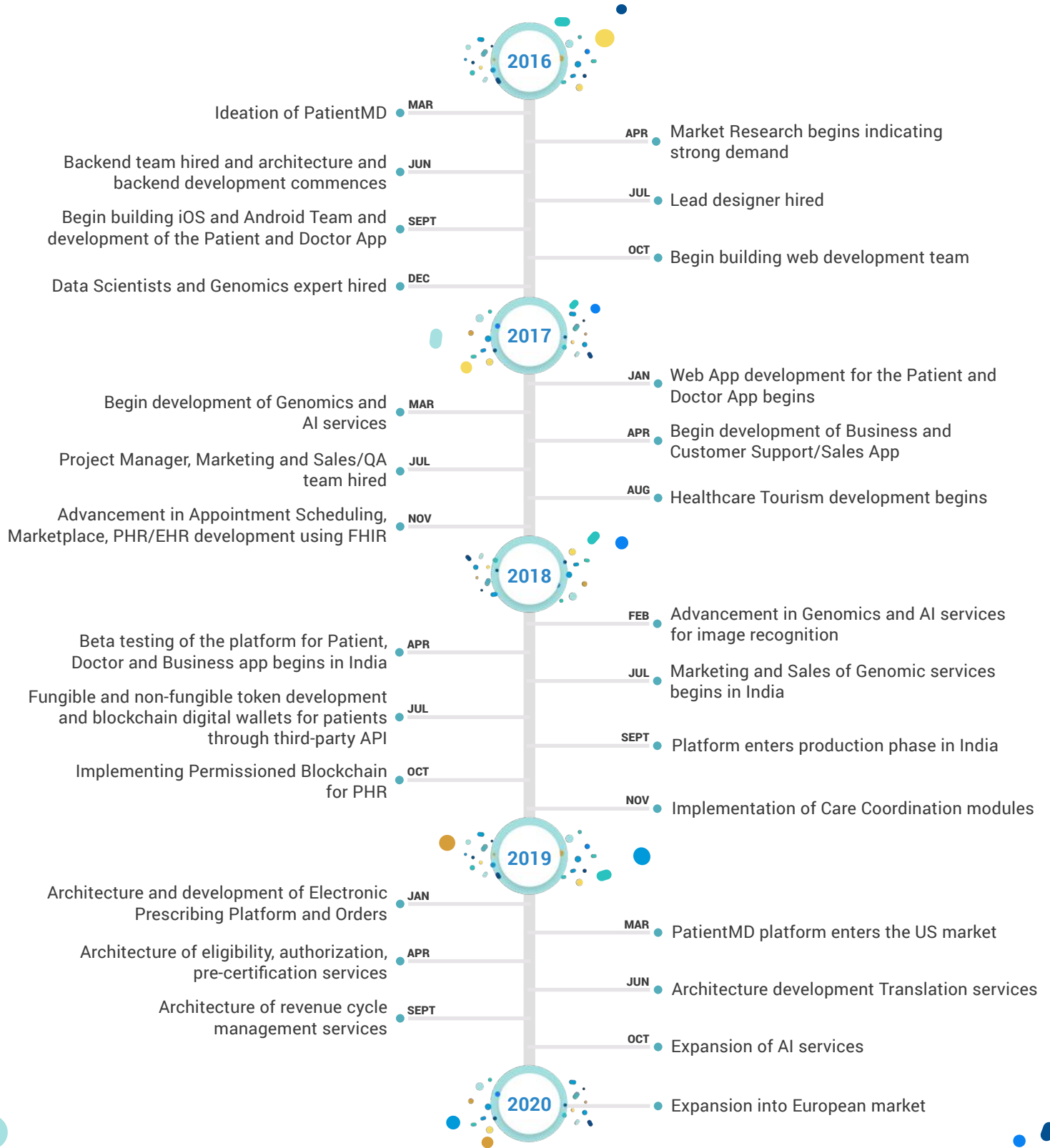
We outline a methodology to enable “price discovery” of patient data via auction method for firms employing models. The firms interested in applying models and gathering analytics sends out a notification to all patients registered in PatientMD that they are conducting an auction for compensating patients for employing their models. Let’s assume there are twenty patients in the system out of which ten patients vote to participate in the auction. Let’s assume each patient decide to put



a minimum ask for their data. For example, patient 1 puts an ask of \$1, patient 2 puts an ask of \$2 etc. The patients do not know what other patients are asking for. The auctioneer does not know what different patients are asking for. The auctioneer puts a bid of \$6 via "Patient" token. All the patients who had asked for less than equal to \$6 will get a fair price of "\$6" for their data. If the auctioneer wants more participants, they will have to raise the bids to get more participants and all the patients get the "higher" price. If the patient does not get an offer, they can lower the ask in the next round.



# 10.0 Product Development Timeline





## 11.0 Token Distribution Event

PatientMD Token Distribution Event (TDE) will be a capped sale raising \$50 million (50,000,000) equivalent of ETH, BTC and /or USD with whitelisted contribution caps.

PatientMD will be issuing 1 billion (1,000,000,000) ERC223 tokens, called "Patient", to create a new blockchain-based healthcare ecosystem.

These tokens will be offered in a crowd sale to allow participants to purchase "Patient" tokens early to contribute and support the further development of PatientMD. Starting on October 1st 2018, participants will have the ability to contribute and receive Patient Tokens in exchange for BTC, ETH, XRP, BCH, EOS, LTC or fiat currency by sending it to a designated address.

During the TDE, "Patient" tokens will be distributed at an exchange rate of 1 token = \$0.20 equivalent in ETH and/or BTC and offered before this date at a discount in a pre-sale.

There will be 1 billion tokens issued, allocated as per the following distribution:

- 33% will be offered in the pre and crowd sale.
  - 22% will be retained by the company, team, advisors, founders and future employees.
  - 45% Marketing, Sales and Business Development
  - 20% Continued platform development
  - 10% Operations
  - 3% Legal and TDE
- 67% will be held in treasury to be issued later.

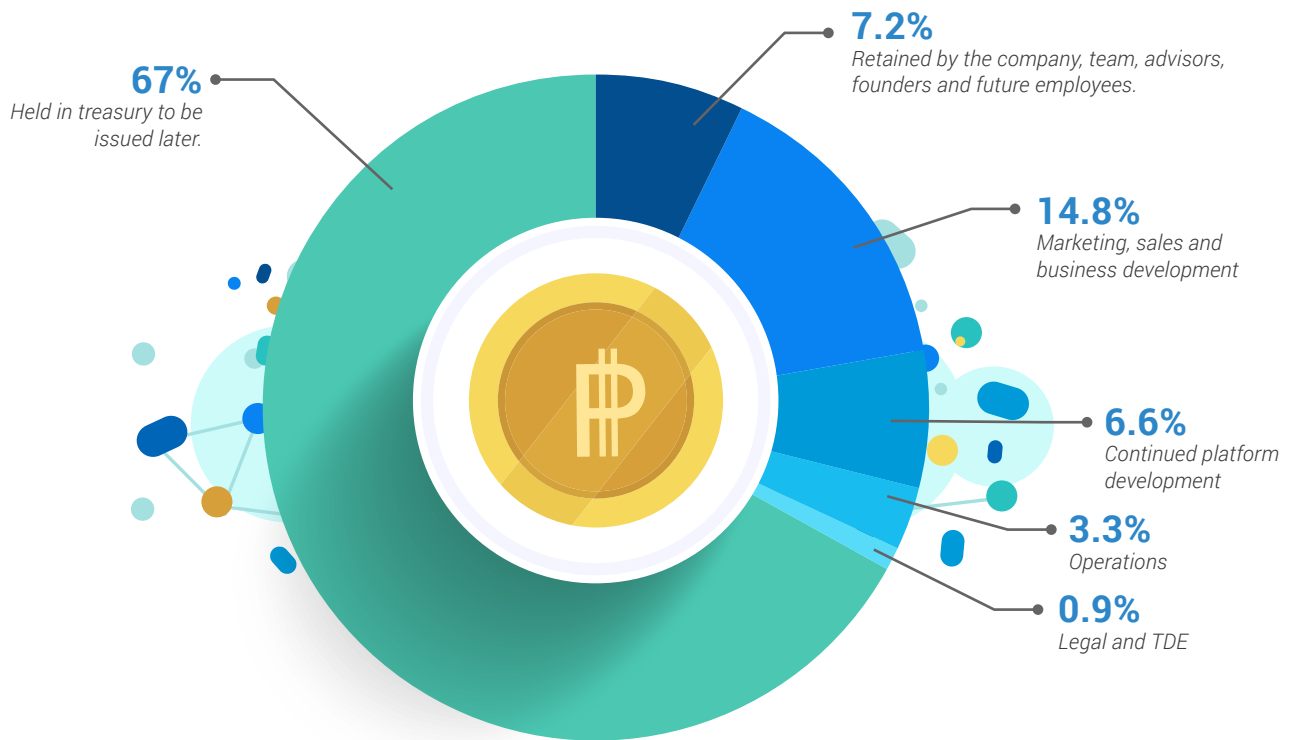


Fig. 10 Token Allocation and Issuance





## Management Team:

### Christ J Pavlatos MD, MBA



As CEO and Founder of PatientMD, Dr. Pavlatos is Board Certified in Orthopedic Surgery through the American Board of Orthopedic Surgeons (ABOS) and Board Certified in Internal Medicine through the American Board of Internal Medicine

(ABIM). He has been practising orthopedic surgery for over 20 years with Illinois Bone and Joint Institute (IBJI.com), one of the top 4 largest Orthopedic groups in the USA. For the past 10 years, Dr. Pavlatos has been a Board Member of The IPA Association of America representing 300,000 independent physicians in the USA.

Dr. Pavlatos and PatientMD are members of Xcertia, an American Medical Association (AMA) initiative providing mHealth App guidelines for the physician and medical community. Dr. Pavlatos and PatientMD are also members of the AMA's project known as Integrated Health Model Initiative (IHMI). IHMI is focused on a collaborative effort from the medical and technology community for creating a standard healthcare data models for improving, organizing and sharing of Patient information. The objective of this initiative is best summarized by AMA CEO James L Madara, MD, "The collaborative effort of IHMI will help the health system learn how to collect, organize, and exchange patient-centered data in a common structure that captures what is most important for improving care and long-term wellness, and transform the data into a rich stream of accessible and actionable information."

Dr. Pavlatos attended the Loyola University of Chicago, where he graduated Magna Cum Laude in Biology. He then attended the University of Illinois College of Medicine where he earned his MD degree, graduating as a member of the Alpha Omega Alpha (AOA) honor society. Dr. Pavlatos completed a residency in Internal Medicine at the University of Illinois Hospitals and Clinics. Following his Board Certification in Internal Medicine, Dr. Pavlatos completed a second residency in Orthopedic Surgery at the University of Wisconsin Hospitals and Clinics

in Madison, Wisconsin. He then completed a Sports Medicine and Arthroscopy Surgery Fellowship under the leadership of Dr. James R. Andrews MD at the American Sports Medicine Institute in Birmingham, Alabama. He then began his practice in Orthopedic Surgery in Illinois with Lake Forest Orthopedics which assisted in the formation of Illinois Bone and Joint Institute in the mid 90's. While in practice, Dr. Pavlatos earned his master's in business administration (MBA) from Northwestern University Kellogg Graduate School of Management. Dr. Pavlatos is a member of the AMA, American Academy of Orthopedic Surgeons (AAOS), ABIM, and the Illinois State Medical Society.

Ten years ago, Dr. Pavlatos met his Co-Founder, CTO/COO, Anirban Majumdar. Dr. Pavlatos and Mr. Majumdar are committed to the vision of PatientMD and have invested a significant amount of their own capital to build their platform with a current team of 35 men and women.

### Anirban Majumdar



Anirban Majumdar is the co-founder and CTO/COO of PatientMD. Prior to founding PatientMD, Anirban spent a decade in investments and finance leading teams in various finance companies such as Actant, Aegon, All State

Investments and Charles Schwab working as Financial Engineer modelling equity, volatility, commodities and currency derivatives, as credit risk manager of large credit derivatives portfolio, as a portfolio risk manager overseeing large portfolio in nine asset classes, as a risk consultant developing risk models for insurance and hedge funds in Chicagoland. Most recently, Anirban worked as a Quantitative Equity Researcher of US and International Securities at Charles Schwab.

Before his career in Finance, Anirban spent many years working in Silicon Valley leading teams in companies like Oracle and BEA Systems. At Oracle, he was project lead at HTB (Healthcare Transaction Base), a HL7 V3 platform. He has patents on interoperability of Healthcare data. Prior



to that, he was a tech lead at BEA Systems where he led a team building infrastructure in the J2EE Application server.

Anirban has BTech in Chemical Engineering from IIT Kharagpur, MS in Computer Science from Alabama and MBA in Analytical Finance from University of Chicago, Booth School of Business.

## Michael Pavlatos



Michael Pavlatos is the Chief Financial Officer and a member of the Board of Directors of PatientMD. Michael is responsible for the financial reporting and fostering legal and investment decision making.

Michael's background spans over 30 years in the Accounting and Finance area, including manufacturing, banking and insurance. Having attained his Certified Public Accounting certification, Michael went on and obtained his Master's Degree in Business Administration from DePaul University , and his Bachelor's Degree from Loyola University.

The team plans in rolling out PatientMD platform live in multiple English speaking countries. In the future, translational services will be available to implement our platform in non-english speaking countries.

## Advisory Board Members

### PatientMD Team

Our current team, up to 35 employees, consists of: iOS and Android developers, Backend developers, Web developers, Designer, Data Scientists, Genomic experts, Digital Marketing, Marketing Analytic employees, Project Managers, Customer Support and Sales Team. We have developed over several million lines of proprietary code along with the use of open source software. We have built 4 mobile Apps and a web app encompassing all the functionality available on the apps on our platform: They are for: Patients, Doctors, Businesses and PatientMD sales and customer support team.