

## **BLOCKCHAIN MD: Medicine Decentralized**

Jonathan Rouwhorst, MD | Chief Executive Officer

January 13, 2018

## TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY .....</b>	<b>3</b>
<b>BLOCKCHAIN: THE FUTURE OF TELEMEDICINE .....</b>	<b>4</b>
<b>THE BLOCKCHAIN MD PLATFORM .....</b>	<b>6</b>
<b>OUR TEAM .....</b>	<b>9</b>
 <b>ROADMAP .....</b>	 <b>10</b>
<b>LEGAL .....</b>	<b>12</b>
<b>CONCLUSION .....</b>	<b>15</b>

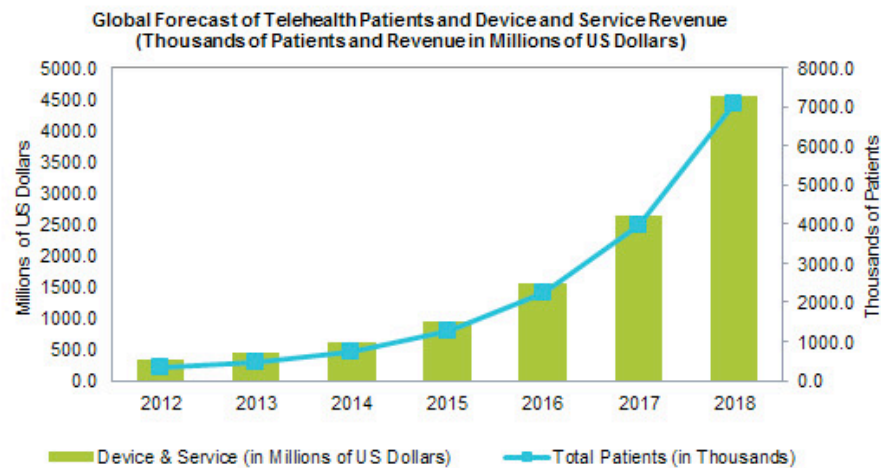
## EXECUTIVE SUMMARY

Telemedicine has evolved considerably in the last decade with a robust growth that outpaces most other segments in the healthcare industry. Meanwhile, the popularity of Bitcoin and other cryptocurrencies has shown a spotlight on Blockchain technology that has fascinated the world, with experts acknowledging that its true value extends far beyond its use as a coin, and instead believe its great potential to disrupt legacy industries such as finance and healthcare is unparalleled in the history of the digital revolution. Despite this, as of this writing, no company has meaningfully applied this emerging technology to the delivery of telemedicine or medicine at large.

Blockchain MD, using a combination of Ethereum-based smart contracts and off-ledger applications, seeks to introduce the power, security and decentralization of Blockchain to this rapidly expanding segment of the healthcare industry. Our team of physicians and software developers brings tested, real-world experience together with a telemedicine service already running live in two states. With our aggressive business plan and launch of our ERC20 token, BMD, we hope to position ourselves as one of the early innovators in this space and to advance this technology into the lives of everyday people.

## BLOCKCHAIN: THE FUTURE OF TELEMEDICINE

Telemedicine, as it exists today, provides a valuable service for patients across all demographics. It is easily accessible from a telephone or computer and removes the barrier of physical space between providers and patients, which can be particularly helpful for those living in remote or underserved areas, those with mobility challenges and for those patients whose primary care doctor is either overbooked or nonexistent.



Source: IHS Technology, January 2014

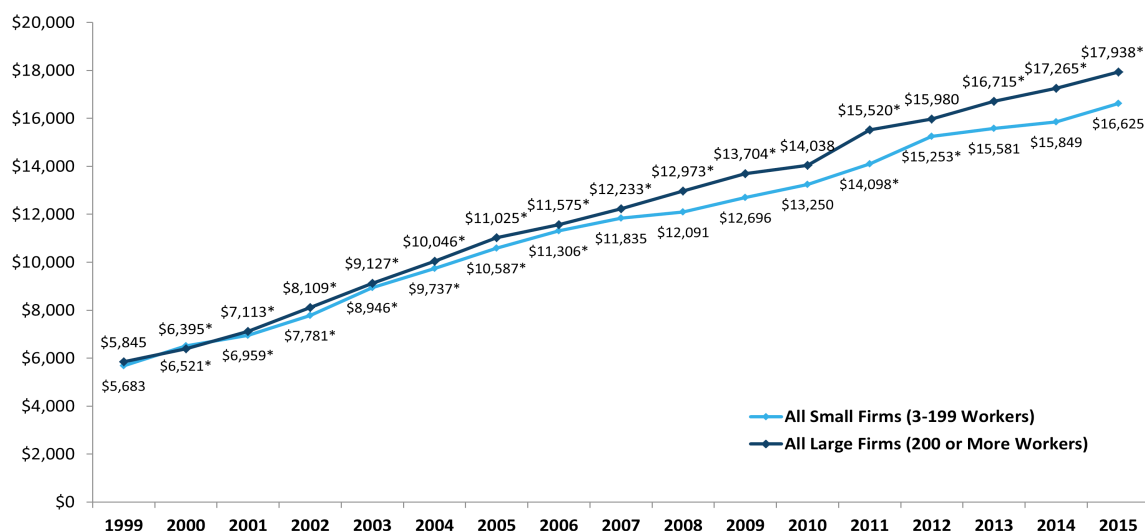
In considerably the same way that telemedicine removes physical space barriers between patients and doctors, Blockchain technology promises to remove financial barriers inherent in the traditional patient-physician relationship by minimizing the role of middlemen in the delivery of telemedicine. Specifically, we are referring to corporate intermediaries which routinely extract 30-50% of the revenue generated by physicians for the practice of telemedicine while simultaneously overcharging their patients for those same visits. Our network will create value by returning much of this lost revenue back into the hands of patients and physicians. We anticipate these financial incentives will drive the adoption of our platform by professionals and the public.

We also believe the adoption of Blockchain MD coins presents an avenue to explore the deployment of smart contracts designed to compliment, or in some cases replace, medical insurance products available today.

Due to ever-increasing cost of insurance premiums and the all-too-prevalent practice of denial of claims, dissatisfaction with the status of medical insurance in the United States is widespread. Furthermore, the complexity of interacting with insurance payers drives costs for physicians, who must hire specialized billing and coding staff to receive adequate payments.

### Exhibit 1.13

#### Average Annual Premiums for Covered Workers with Family Coverage, by Firm Size, 1999-2015



\* Estimate is statistically different from estimate for the previous year shown ( $p < .05$ ).

SOURCE: Kaiser/HRET Survey of Employer-Sponsored Health Benefits, 1999-2015.



While this remains a secondary goal, our intention is to create an interface for physicians to easily design and deploy smart contracts whereby a guarantee is made to provide medical treatment, as needed, for a population of patients, over a specified period of time, in exchange for an agreed upon amount of Blockchain MD coins. Due to the ever-increasing nature of private insurance costs, we believe Blockchain-deployed smart contracts and similar

technological advances, will play an important role in the next generation of medical insurance.

## THE BLOCKCHAIN MD PLATFORM

Decentralized networking between patients and providers using a deliberate construction of off-chain applications and on-chain DApps will form the core of our solution to the problem of decentralizing telemedicine.

We will rely on separate user-interfaces for patients and providers, using both mobile and web-based applications, which will be designed to ensure full HIPAA compliance. [Note: HIPAA is the Health Insurance Portability and Accountability Act, which is legislation of the United States that provides data privacy and security provisions for safeguarding medical information.]

Patients will gain access to the system by securely uploading their demographic information with a basic description of their chief medical complaint. Thereafter, patients may elect to choose a specific provider on the network with which to schedule an appointment, or may choose to see the next available specialist, according to our pool of available providers. All fees will be transparently displayed in advance and patients will be allowed to deposit cryptocurrency – specifically Blockchain MD tokens – in anticipation of the visit, which will be deposited into the provider’s account upon visit completion.

A copy of all visit summaries from current and past encounters will be made available through this application which shall include additional educational resources pertinent to their complaints and detailing when to seek follow-up care or advice.

## Schedule Online

Jan 2018 [<](#) [Today](#) [>](#)

Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	3	4
5	6	7	8	9	10	11

[Weekly view](#) ^

### General Telemedicine Visit

30 min | \$55.00

Online

[Next](#)

Providers will be presented with their choice of a web-based or mobile interface which will allow them to login and prompt them to specify their availability. They will then be given a list of patients currently seeking treatment on the network. Providers will have the ability to choose which patient they would like to prioritize for a visit.

Providers will have the option to customize their fees, schedules, and even the types of patients and encounters they are willing to accept, allowing them the flexibility to practice medicine when and how they choose, often as a stream of additional revenue along-side their brick and mortar practices.

All of these payments and encounters will be enforced using smart contracts on the Ethereum Blockchain. A minimal transaction fee will be taken to support the network. These fees are projected to remain within a range of 2-4% of the transaction cost. This represents a significant improvement over many telemedicine companies, extracting an estimated 30-50% of the overall payment. Furthermore, it is our intention to eventually democratize the distribution of funds collected from these transaction fees and allow providers to decide, by means of smart contract-enforced voting, how these fees shall be spent – whether as revenue for marketing, to invest in additional network functionality and so forth.



Additionally, we propose to make medical malpractice insurance available on a per diem basis, which will be factored into the transaction cost, adding an estimated 1-2% to the overall transaction fee. This will be optional and may be necessary only for physicians whose current policies do not extend coverage to include medical liabilities arising from the practice of telemedicine. Overall, our goal is to individualize our services and transaction fees in order to provide the best value attainable for our participating physicians and patients.





## OUR TEAM



**Jonathan Rouwhorst, MD**  
Chief Executive Officer

Dr. Rouwhorst brings his years of experience as a board-certified family medicine physician and medical director of Beat Healthcare. He has held multiple positions in telemedicine, urgent care and is a former professor of clinical medicine at Michigan State University. He combines his passion for innovation with a special interest in medical informatics.



**George Timmer, PhD**  
Chief Technology Officer

Dr. Timmer earned his doctorate from the University of Wisconsin-Madison with an emphasis on computational chemistry. In addition to his strong research background, he has years of experience in application development in the private sector and is currently lead developer for our DApp.



**Christopher Platt**  
Engineer Consultant

Mr. Platt serves as the lead database engineering consultant for Blockchain MD. He is a veteran of the field of database design with a specialization in medical imaging.



**Eric Duckett**  
Marketing Consultant

Mr. Duckett lends to the team his energy and talent in the space of cryptocurrency. He has a diverse background and skillset and is a graduate of the University of Massachusetts, Amherst where he concentrated in sociology and economics.



**Jennifer Thornell**  
Provider Relations

Ms. Thornell manages provider relations in addition to providing on-boarding and credentials verification services for new physicians.



## ROADMAP



### 2018 - Q1

Launch of our immediate-care based telemedicine service and issuance of Blockchain MD (BMD) currency on the Ethereum blockchain.



### 2018 - Q2

Development of frictionless web and mobile-based applications for the conversion of major cryptocurrency into BMD coins for seamless network payments and scheduling.



### 2018 - Q3

Recruitment of additional physicians with the goal of providing general telemedicine services to patients located throughout the United States.



### 2018 - Q4

Further development of our marketplace to enable automated, decentralized scheduling based upon patient location, physician credentials and specific patient-physician preferences.



### 2019 - Q1

Enhancement of our Medician DApp for the automated allocation of payments based on patient satisfaction scores and physician performance.



### 2019 - Q2

Creation of dynamically assigned supervisor-midlevel relationships for the inclusion of physician assistants and nurse practitioners into our marketplace.



## 2019 - Q3

Recruitment of psychiatrists, psychologists and social workers for the expansion of our services with the expectation of treating common behavioral health conditions, such as depression, anxiety and mood disorders.



## 2019 - Q4

Begin migration of our EMR to the blockchain for enhanced portability, accessibility and security of patient records.



## 2020 and Beyond

Expand our network to include the use of Blockchain MD currency for the payment of traditional brick-and-mortar practices with in-person physicians.

Explore the inclusion of teleradiology services into the marketplace with the goal of providing a blockchain storage solution for digital medical images.

Explore the potential of Blockchain MD currency and the decentralized medical exchange to offer a cost-effective, tokenized alternative to traditional medical insurance.

## LEGAL CONSIDERATIONS

PLEASE READ THESE TERMS AND CONDITIONS (“T&C”) CAREFULLY PRIOR TO THE PURCHASE OF BLOCKCHAIN MD TOKENS (ALSO REFERRED TO AS “COINS” OR “BMD”), AS YOU WILL BE BOUND BY THESE TERMS AND CONDITIONS, WHICH INCLUDE A BINDING ARBITRATION CLAUSE AND A CLASS ACTION WAIVER. IF YOU DO NOT AGREE WITH THESE TERMS AND CONDITIONS DO NOT PURCHASE “BMD” COINS.

These TERMS AND CONDITIONS between ALARA TECHNOLOGIES, INC — (the “Company”), d/b/a “Blockchain MD”, which is incorporated in the State of Michigan, USA and which includes all references to “us”, “we”, “our” “Blockchain MD” or “[blockchainmd.io](https://www.blockchainmd.io)” — constitute a legally binding agreement with the Parties, also referred to as “you”, “your”, “purchaser”.

The Purchasers of BMD token, by the fact of their use or purchase of these tokens, agree that they have read and fully understood and accepted irrevocably these TERMS AND CONDITIONS.

The information contained on the Blockchain MD website or otherwise published elsewhere is descriptive in nature, and does not form a part of these TERMS AND CONDITIONS and is not binding.

The Company seeks to establish, maintain and evolve an independent network of patients and physicians with reliance on blockchain technology, where appropriate, for various components of this network.

### SEVERABILITY CLAUSE

If any term of this Agreement is held by a court to be invalid or unenforceable, all other Terms shall remain in full force and effect and the parties shall use all reasonably available methods to substantially achieve the same result as that described by such Term. It is declared to be the intention of the parties that they would have executed all other Terms without the inclusion of any such that may be declared hereafter as invalid.

### LIMITATION OF LIABILITY

By purchasing “BMD”, the Parties acknowledge that the Company is not required to provide a refund, that all sales are final and that no compensation will be made for any tokens which are unused, lost, or stolen. The Company is not liable for any damages of any kind in any way related to the sale or use of tokens. Any medical advice or treatment obtained as a result of this service is solely the responsibility of the provider from which that advice or treatment was obtained and the Company is not liable for any damages of any kind in any way resulting from medical advice or treatment or lack thereof or any other form of liability arising from interaction between parties utilizing the network maintained by the Company.

The Company is not responsible for loss associated with security breaches, hacking, malfunction of the underlying technology, mining attacks or other disruptions of the

Ethereum Blockchain, losses resulting from insufficient liquidity, loss of value of the tokens, inability of the Company to continue operations due to lack of interest of customers, insufficient revenue, other financial uncertainties which will prevent further development of the network or other unanticipated risks.

The purchaser agrees not to engage in any illegal activity in relation to money laundering, terrorist activities or other criminal activities or to transact with countries which may be subject to economic sanctions by the governing bodies of the United States, European Union, or United Nations.

In the event of lawsuits to the Company in association with non-compliance by the purchaser of the BMD Coin Terms and Conditions, the purchaser agrees to settle such claims at his own expense and agrees to fully compensate the Company for any losses, including legal fees.

Parties interested in the purchase of BMD coins should determine the potential risks and benefits of owning these coins. By purchasing or using these coins, you understand that BMD tokens bestow only the right to obtain services from the Blockchain MD network for medical services and bestow no additional legal or financial rights pertaining to the Company which may include but are not limited to governance or voting rights, proprietary rights, redemption or liquidation.

Purchase of these coins is recommended only to those individuals or entities who are experienced in the exchange of cryptographic currencies and knowledgeable of the risks inherent in the purchase or transmission of cryptographic currency. Such knowledge should include the proper methods of transmission, storage and best practices relating to security as it pertains to the holding of these currencies.

In case of the purchaser's violation of the T&S, the Company may terminate the purchaser's access to the network and all rights granted within the T&S will immediately be revoked and the balance of any funds retained by the purchaser on the network will be returned, less amounts owed to Blockchain MD, if any.

By purchasing these tokens you are acknowledging a full and careful review of these Terms and Conditions and consent to be bound by these Terms and confirm that you are of legal age and authorized to purchase BMD coins in all relevant jurisdictions.

Disputes related to these T&Cs cannot be brought as a class action or other type of representative action, or on behalf of any other individual or group and will be resolved only through individual arbitration. It is also agreed that a good faith period of no less than forty-five days following written notification of the dispute will occur to allow for a resolution of the dispute.

Because of the developing legal framework surrounding this new technology, there is a risk that some jurisdictions might consider BMD coins to be a security or may do so in the future. Each purchaser shall bear the legal or financial consequences of this designation and is responsible for determining the legality of these coins in his respective jurisdiction.

By purchasing these coins on an exchange or by transferring Ether to the Blockchain MD coins address, you acknowledge that you have read these Terms and understand the risks



associated with this purchase, and that any risk or loss of coins purchased from Blockchain MD is now solely the responsibility of the purchaser.

## CONCLUSION

Telemedicine has evolved tremendously throughout the last decade as an important and rapidly growing part of our healthcare infrastructure, capable of delivering convenient, evidence-based care to patients throughout the entire medical spectrum, regardless of location.

Blockchain technology is uniquely suited to propel telemedicine into the next generation of medical care and to achieve the promise of its true potential, becoming decentralized, accessible, secure and affordable.

Blockchain MD seeks to establish itself as an important early entrant into this emerging and potentially revolutionary new era of medicine and we hope that you will join us.