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DEVELOPMENT OF BLOCKCHAIN IN HEALTHCARE

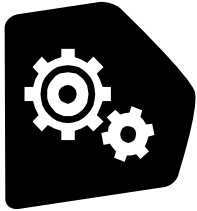
Jonelle Saunders

May 14, 2019

BLOCKCHAIN 101



Blockchain 101



What is blockchain? A decentralized shared ledger for recording the history of transactions that cannot be altered



Decentralized means it is distributed and no one is an owner



A chain of computers approves transactions before they are verified and recorded



Transactions are not valid until added to the chain



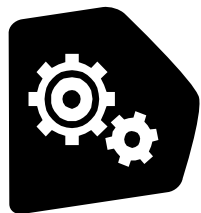
Everyone on the network can see transactions



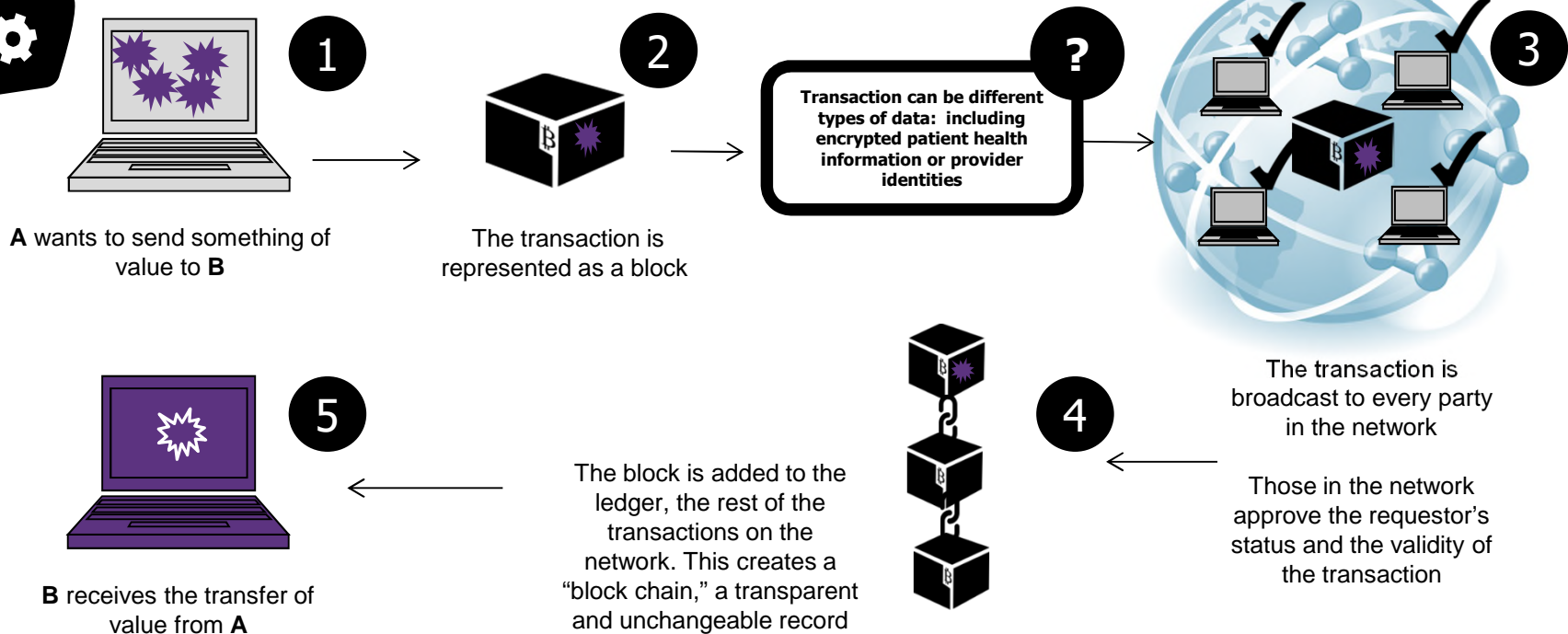
Blockchain network is encrypted and secure



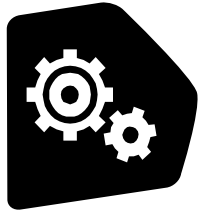
Blockchain 101



How does blockchain work?



Blockchain 101

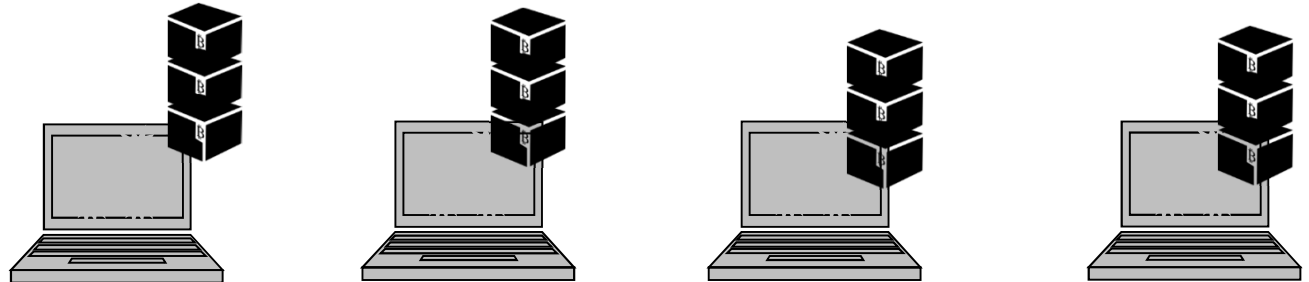


Present
Data Silos

**Synchronized, distributed ledger with multi-level access
and encryption control**

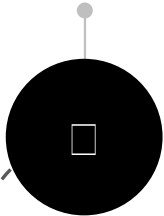


Blockchain
Collective shared
ledger



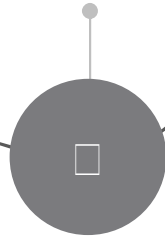
Why is Blockchain Important to Healthcare?

Stakeholders can shape development and empower patients to be active healthcare consumers. There is a growing trend towards personalized medicine and wearable health technologies



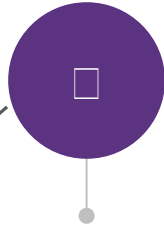
30-40%

Costs of administration of the pharmaceutical industry by US government agencies is considered waste because of inefficiencies from a disparate tracking system



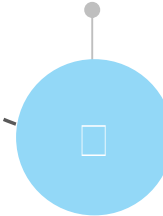
\$35.4M

Global healthcare blockchain technology value in 2017, expected to reach \$3,250M by 2026



3/4

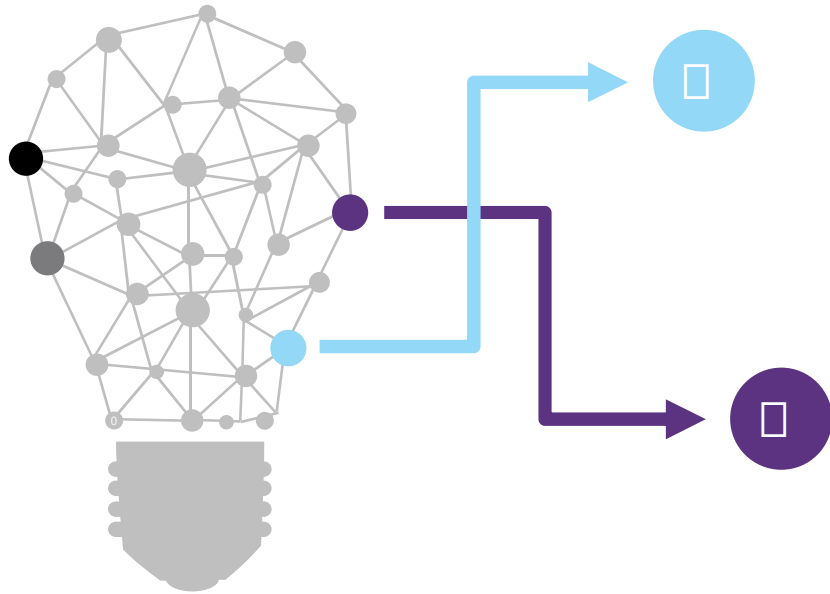
Healthcare leaders see a "compelling business case" for blockchain in their organizations



The type of transactions that can be added to a block varies. Since the technology is in its infancy, stakeholders can determine where to apply the technology

INDUSTRY COLLABORATIONS

Organizations Seek Value



Change from a theoretical focus on blockchain in healthcare and biopharma



Real-world applications and testing of blockchain in healthcare

Accountable Care Organizations

- Affordable Care Act goal to reduce health care costs
 - Encourage doctors, hospitals and other health care providers to form networks to coordinate patient care
 - Eligibility for bonuses when care is delivered more efficiently
- Each ACO manages the health care needs of a minimum number of Medicare beneficiaries for a specified amount of time
- The goal is to ensure patients get the appropriate care at the right time and to avoid unnecessary duplication of services and preventing medical errors.

Patient Care Metrics

Partners



- ✓ Relieve administrative burdens, reduce waste in the system, and improve healthcare outcomes
- ✓ Central entity to control data
- ✓ Delays in payer reimbursement

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Application

- Utilize blockchain technology, cloud computing and cognitive learning to give providers quality metrics

- Care.Wallet is a rewards program that allows providers to view performance data, compare their success with others in the network and redeem financial rewards

- Plans to launch Care.Wallet for patients to automatically synchronize patient benefit information, including deductibles and copays, co-insurance and out-of-pocket expenses, into the blockchain

- Use the blockchain to obtain immediate authorization, schedule appointments and share benefits information.

Drug Supply Chain Security Act

- Federal standard that "outlines steps to build an electronic, interoperable system to identify and trace certain prescription drugs as they are distributed in the United States"
 - Product verification – Verify a product's "chain of custody" at any time. Industry players must be able to store transaction history between different members of the supply chain, which requires the ability to use data from different stakeholders
 - Serialization – Unit-level product identifiers such that drug are serialized from start to finish
 - Traceability – Interoperable system to store unit-level data at each transaction from suppliers to drug dispensers such as retail pharmacies and hospitals.

Specialty Drug Tracking

Partners



- ✓ Design and evaluation support
- ✓ Policy and industry standards development
- ✓ Provider implementation across locations
- ✓ Track transfers networks and other provider networks
- ✓ Address inventory shortages

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Application

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- Test implementation of the Drug Supply Chain Security Act (DSCSA)
 - Focus on health system medication transport and usage in North Carolina, Indiana, and Tennessee.
- Examine the application of blockchain and Internet of Things (IoT) technology used to monitor specialty medication distribution across supply chains.
- Improvement in the chain of custody with near real-time exchange of information happening from the manufacturer of the drug to the distributors, to the logistics providers, to the sites and, and ultimately to the patient.

Drug Supply Chain Working Group

Partners



MCKESSON



- ✓ Wholesale medicines are through distributors, with pricing and eligibility contracts negotiated separately
- ✓ Chargebacks represented the largest single deduction from gross sales for healthcare companies

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Application

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- Improve on the chargeback process in the pharmaceutical industry
- Parties are made whole on the price difference through a chargeback framework
- Saleable return drug verification that meets the requirements of the DSCSA Act
- Protocol provides lifecycle management of a product's item number, request and response messaging and change of ownership of a product in the case of a merger or an acquisition

CMS Interoperability Initiatives

- On February 11, 2019, the Centers for Medicare & Medicaid Services (CMS) proposed policy changes supporting its MyHealthEData initiative through the Interoperability and Patient Access Proposed Rule
 - The goal is to improve patient access and advance electronic data exchange and care coordination throughout the healthcare system
 - Opportunities to make patient data more useful and transferable through open, secure, standardized, and machine-readable formats while reducing restrictive burdens on healthcare providers
 - Data would include information about adjudicated claims, diagnoses, procedures, tests, and providers a beneficiary has visited
 - Insights into a beneficiary's health and healthcare utilization.
- In addition to the policy proposals, CMS is releasing two Requests for Information (RFIs)

Transparency and Interoperability

Partners

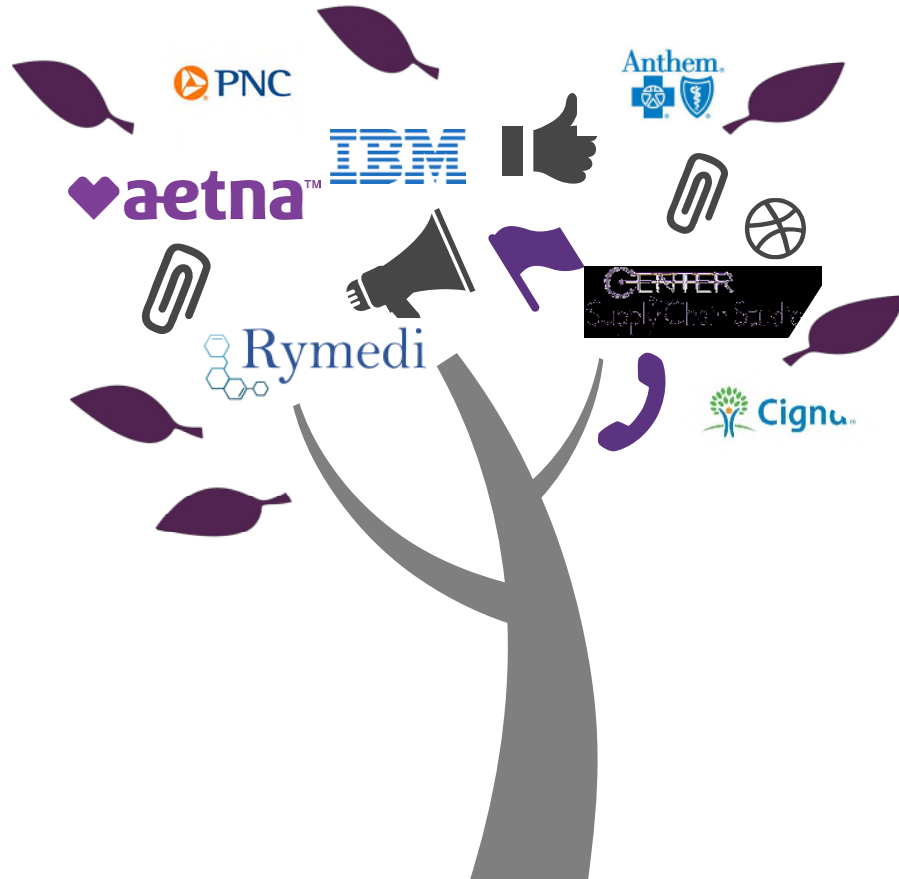


- ✓ Sharing personal health information
- ✓ Accuracy in provider directories
- ✓ Information blocking hurdles

Application

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- Experimenting with different areas of focus with an aim to build an inclusive blockchain network that members of multiple organizations can use to securely share personal health information
- Large network of members can exchange sensitive data in a permissioned, controlled and transparent way
- Leveraging the distributed ledger technology to facilitate the transition to value-based care, such as bundled payment arrangements
- Tackle administrative waste in healthcare and target areas where there is redundancy and inefficiency

Growing Partnerships



Biography



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Jonelle C. Saunders focuses her practice on healthcare and litigation matters, as well as governmental and internal corporate investigations. Jonelle advises clients on general litigation strategy, regulatory enforcement, and compliance counseling. She also provides counsel to stakeholders across the healthcare industry including hospitals, health systems, large physician group practices, chain pharmacies, and global pharmaceutical and medical device manufacturers on US federal and state fraud and abuse matters and False Claims Act (FCA) actions.

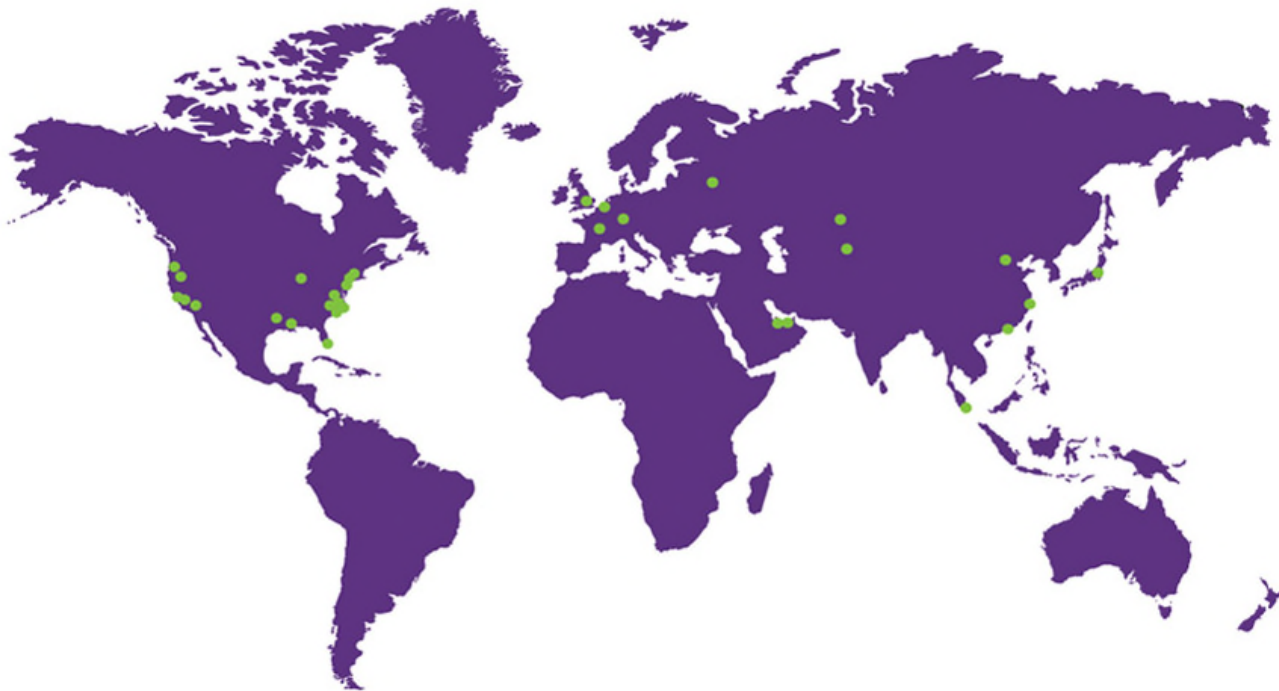


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