



The Office of the National Coordinator for  
Health Information Technology

# A Top Down look at Blockchain - the Federal Perspective

## HIMSS 19 Blockchain Symposium

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# ONC “In a Nutshell”

  
The Office of the National Coordinator for  
Health Information Technology

- ONC focuses on the Administration’s priority of building a health system that delivers value and maximizes the promise of health IT.
- We use our levers to accelerate individuals’ ability to access and send their health information so they can shop for and coordinate care.





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## **ONC'S Mission**

**Improve the health and well-being of  
individuals and communities through  
the use of technology and health  
information that is accessible when  
and where it matters most.**

# Session objectives

- Outline the work of HHS and the role they play in technology decisions
- Demonstrate how HHS looks at new technologies, and how technologies like blockchain become part of the discussion
- Discuss HHS's current blockchain strategy and the expected near and medium term impacts of those efforts
- Review key considerations for the private sector as they design impactful solutions

# ONC -- A Focus on 21<sup>st</sup> Century Cures

ONC is focused on the 21<sup>st</sup> Century Cures Act's priorities of increasing nationwide interoperability and reducing clinician burden.



## » Interoperability Efforts:

- Promote standardized, application programming interfaces (APIs)
- Combat information blocking
- Accelerate data exchange between disparate health information networks.
- Promote patient access to health information
- Administer the Health IT Advisory Committee (HITAC)

## » Provider Burden Efforts:

- Develop strategy with the Centers for Medicare and Medicaid Services (CMS) to reduce administrative and reporting burden among clinicians.

# What kind of blockchain do you want to be?

- Public
- Private
- Permissioned
- Permission-less

# How “off the chain” are we?

- HHS
  - » Last year HHS launched Accelerate, which uses distributed-ledger technology, machine learning and artificial intelligence to deliver real-time information on pricing and terms and conditions from across HHS. It is designed to facilitate the Federal Acquisition Lifecycle.
- GSA
  - » <https://www.gsa.gov/technology/government-it-initiatives/emerging-citizen-technology/blockchain>
- NIST IR8202
  - » <https://www.nist.gov/publications/blockchain-technology-overview>
- Congress
  - » <https://www.congressionalblockchaincaucus.com/>
- Other work/interest across many other Departments

# Overview of ONC engagement

- **Blockchain Challenge (Summer 2016)**
- **Use of Blockchain in Healthcare and Research Workshop (September 2016)**
- **The Blockchain in Healthcare Code-A-Thon (March 2017)**
- **Blockchain Technology and Healthcare Webinar (February 2018)**
- **“Oh the Places Data Goes: Health Data Provenance” Challenge (March 2018)**

# "Use of Blockchain in Health IT and Health-Related Research" Ideation Challenge

- 15 Whitepaper winners
- <https://oncprojecttracking.healthit.gov/wiki/display/TechLab1/Blockchain+Challenge+on+ONC+Tech+Lab>
- Smaller sample invited to speak at NIST-ONC workshop
- Winning papers themes included:
  - » Algorithms, Privacy, and Data
  - » Claims processing
  - » Medication reconciliation
  - » Improving electronic health information exchange and patient engagement
  - » Secure records storage
  - » Health research and consent management
  - » Medicaid applicants

# Blockchain in Healthcare Code-A-Thon

- Co-hosted by ONC and the Chamber of Digital Commerce
- March 14 -15, 2017 at Georgetown University
- Solicited distributed ledger projects that addressed one or more of the following:
  - » Identity Management and APIs
  - » Metadata Tagging and Policy Expression
  - » Data Aggregation and Linkage



# Interoperability in Action Webinar Series #4

## Blockchain in Healthcare

- **Keynote speaker** Justin Herman of General Services Administration (GSA)
- **Blockchain NIST** update presented by the National Institute of Standards and Technology (NIST).
- **Presentations from the four 1<sup>st</sup> round winners of ONC's Health Data Provenance Challenge** in which participants proposed solutions to real-world obstacles for provenance in clinical care. Of the four 1<sup>st</sup> round winners, three proposed solutions based on the use of blockchain technology.
- **HHS Roundtable** and Q & A session.
- <https://oncprojecttracking.healthit.gov/wiki/display/TechLab1/2018+Interoperability+in+Action+Webinar+Series+%234>

# Potential Healthcare Blockchain Use Cases – 2+ years later

- Identity Management (Identity, authentication, authorization,) and credential verification
- Access Control and Consent
- Auditing
- New and Improve Workflows
  - » IRB Clinical Trial approval
  - » Patient sharing of data
  - » Supply Chain -- Drug dispensing, monitoring
  - » Tracking and access to Internet of Things
  - » Hospital Stays
  - » Medicaid Eligibility
  - » Claims process and payment automation
- Off chain record location and viewing

# Federal Government Use Cases

- Blockchain use cases other agencies are exploring touch many parts and processes of an organization, including:
  - » Financial management
  - » Procurement
  - » IT asset and supply chain management
  - » Smart contracts
  - » Patents, Trademarks Copyrights, Royalties
  - » Government-issued credentials like visas, passports, SSN and birth certificates
  - » Federal personnel workforce data
  - » Appropriated funds
  - » Federal assistance and foreign aid delivery



THANKS!

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