Rethinking Identity and Trust in Medical Licensing

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Why is this important?

- Fundamental notions of trust and social structures are changing
- Changes in regulation and occupations
- Need to align federal and state policy
- Creation of new platforms of trust

Goal:
Create guidance on how to understand and improve guarantors of trust in a regulated industry
Why the FSMB?

• Represent Interests of 70 State Medical Boards

• Uniquely positioned in healthcare and regulation
  – Creator of attributes
  – User of attributes
  – Custodian of attributes
  – Credentialing Platform Covers 300,000 physician records, used in 50% of licensing decisions and broadly across hospital
The Pathway to Medical Licensure

Pathway to Medical Licensure in the United States

U.S. Pre-Medical
- Register for MCAT
- Apply with AMCAS and/or AAMC

U.S. Medical School 1st Year

U.S. Medical School 2nd Year
- USMLE Step 1
- COMLEX-USA Level 1

U.S. Medical School 3rd Year
- USMLE Step 2 CK
- USMLE Step 2 CS
- COMLEX-USA Level 2 CE
- COMLEX-USA Level 2 PE

U.S. Medical School 4th Year
- Register for NRMP
- Register for AOA Match
- Register for ERAS
- Obtain MD or DO degree

IMG Preparation for U.S. Residency
- Obtain MD degree or equivalent
- USMLE Step 1
- USMLE Step 2 CK, USMLE Step 2 CS
- Obtain ECFMG certification
- Obtain Visa, if indicated

After the Start of U.S. Residency
- USMLE Step 3
- COMLEX-USA Level 3
- Apply for state training license, if indicated, or full and unrestricted state medical license, if eligible

Before the End of U.S. Residency/Fellowship
- Begin to apply for employment or make plans for independent practice
- Apply for full and unrestricted state medical license(s)
  - Apply with FOGO (may be required)
  - Apply with Uniform Application (available in many states)
  - Apply with individual state medical board(s) (if applicable)
- If indicated/desired:
  - Apply for ABMS/AOA Specialty Board Certification Exam
  - Apply for hospital privileges
  - Apply for provider status with health insurance companies
  - Apply for DEA Registration, if applicable
  - Obtain Medicare/Medicaid privileges, if applicable

Ongoing Medical Practice
- State licensure renewal, including state-specific requirements, if indicated, such as:
  - Continuing Medical Education
  - Maintenance of Certification and/or Osteopathic Continuous Certification, if desired
  - If more than one state medical license is desired, apply for IMLC where applicable
Credentialing Workflow

Physician Submits Credentials Application

Supporting Documents Received

Verification Requests Sent: Exams MedEd PGT/GME

Primary Source Verifications Received

Final Quality Review for: Accuracy & Completeness

Completed Profile sent to relying party
What Problem Are We Trying to Solve?

• **Identity: Essential to Licensing and Credentialing**

• **Volume of Transactions**
  - ≈ 1,000,000 US licensed physicians
  - ≈ 80,000 new US medical licenses each year
  - ≈ 30,000 medical school graduates each year

• **For Each Day We Don’t Solve It**
  - 16 FTE physicians are idle
  - Lost revenue and income throughout healthcare ($16,000/day/physician)
  - *Patient Access to Care suffers*
2 Year Transformation Journey

• **Process improvements**
  – Workflow management
  – Go Paperless

• **Use of electronic signatures**
  – Release of records
  – Verification of credentials

• **Institutions changing the way they work**
  – Make it easy
  – Use of technology
Internal Improvements....

Cycle time for FCVS (in days)

- External Wait Time: 36%
- Internal Cycle Time: 64%
DocuSign Integration Adds Value

Volume by Day

Volume by Year and Month

AUDCreateDate
2/28/2018 4/9/2018

HttpMethod
- GET
- POST
- PUT

StatusCode
- 200
- 500
....but Addressing External Issues are the key

Cycle time for FCVS (in days)

- External Wait Time: 36%
- Internal Cycle Time: 64%
Why Look At Blockchain?

- Multiparty
- Inconsistency in attribute characteristics
- Static and dynamic attributes
- Significant misalignment of “trust”
- Technical friction
FSMB Blockchain Pilot

- **Scope**: demonstrate a simple workflow, pertinent to medical boards, using a blockchain tool
  - Medical Education Verification Form(s) selected
  - Included tampered and falsified attributes

- **Learning Machine** selected as our partner
  - Blockcert was ready for use as decentralized credential verifier
Blockcert Workflow

1. Issuer invites recipient to receive a blockchain credential
2. Recipient accepts invitation, sending issuer their blockchain address
3. Issuer hashes credential onto the blockchain
4. Issuer sends recipient a certificate
5. Recipient receives certificate
6. Recipient sends certificate to verifier (medical board)
7. Verifier checks the blockchain to verify the certificate

Illustration obtained from Learning Machine.
Presentation of the Attribute Artifact

Recipient sends certificate to verifier (medical board)

After the certificate has been added to the recipient’s wallet, it can now be shared and sent to the verifier. In this example, is represented as a reporting entity.
Presentation of Attribute Artifacts – Options to Consider

- Attachment of digital copy on the blockchain
- Attach encrypted/decryptable copy
- Create a hashed copy on the blockchain

Takeaways:
- Pros and cons to each option
- Need agreement on what the relying parties actually need
- What complies with federal and state regulations?
Interstate Medical Licensure Compact – Governance v0.5

- Interstate Contract for expedited licensure
  1. State of Principal Licensure verifies 8 physician identity elements
  2. Other states rely on 1 verification
  3. Information shared across system

- Addresses dispute resolution and rulemaking

- Is this a starting point for regulated industry smart contracts?
Next Steps

• **Continuation of Pilot Projects**
  – FSMB-NAMSS pilot on graduate medical education forms
  – Provider Directory?
  – Continuing Medical Education reporting?
  – Remaining Tech Agnostic

• **Advocacy and Education Efforts**
  – State Boards and Lawmakers
  – Key Federal Agencies
  – Physician population
  – International Education Community
Lessons Learned

• Institutional habits are hard to break
• Investment in administrative systems can be slow
• Standards for data exchange necessary
• Success is dependent on collaboration and cooperation between regulators, innovators, regulated community

Final Thought:

Technology will evolve trust mechanisms......
but the technology should be the last concern.
Contact Information

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PROMOTING THE HIGHEST STANDARDS FOR MEDICAL LICENSURE AND PRACTICE