

May 2 – 4, Philadelphia  
**iHealth 2017 Clinical Informatics Conference**

*Creating real solutions through evidence- and experience-based practice*



# Health Record Banks Essential for Patient Care and Population Health

Twitter: #iHealth17

William A. Yasnoff, MD, PhD  
Johns Hopkins University



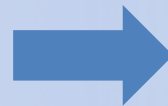
[amia.org](http://amia.org)

# Disclosure

- I and my spouse/partner have no relevant relationships with commercial interests to disclose.

# Unified Health Records Essential for Triple Aim

- Better Health
  - Prevention
  - Population Health
- Better Care
  - Better Decisions
- Lower Costs
  - Fewer Errors
  - Less Duplication

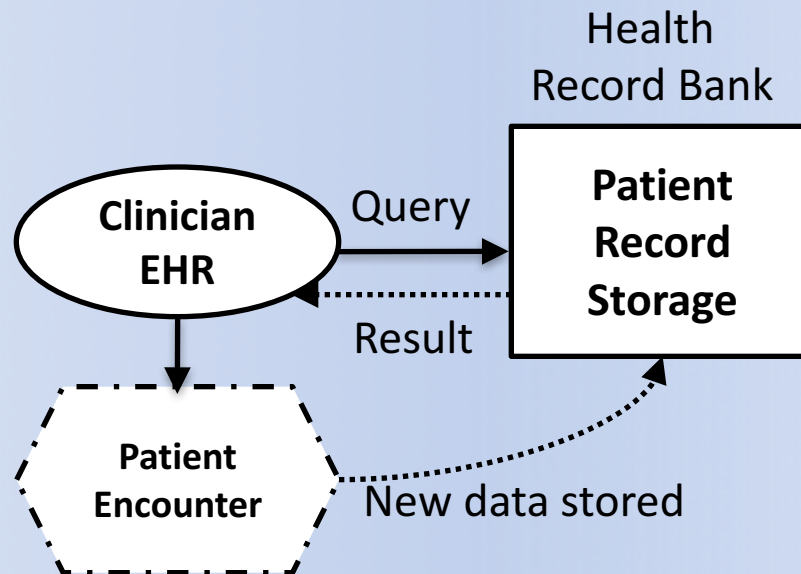


**Comprehensive  
Longitudinal  
Electronic  
Patient  
Records  
When/Where  
Needed**

# What is a Health Record Bank?

[http://videos.weebly.com/uploads/9/6/9/4/9694117/hrba-0001\\_362.mp4](http://videos.weebly.com/uploads/9/6/9/4/9694117/hrba-0001_362.mp4)

# Health Record Bank Architecture



# Why Health Record Banks?

- Patient is only entity with guaranteed legal access to all records (via HIPAA)
- Patient Control
  - Promotes trust
  - Allows each patient to set own privacy policy
- Operationally simple (*i.e.*, low cost)
  - Records immediately available
  - Deposit new records when created
  - Enables value-added services (apps)
  - Enables population health & research queries

# Health Record Bank Characteristics

- Community scope
  - Nearly all care of residents in community is local
  - Easier to connect to all local sources (vs. nationwide)
  - Promotes trust
- Allows linkage to other person-centric data
  - For prevention and non-medical interventions
- Independent organization
  - Separate from providers, but serves their needs
  - Third party privacy and security certification

# How Can Health Record Banks be Secure?

- Need to eliminate potential for loss of entire centralized data repository
- Personal Grid architecture
  - Each patient's record stored in separate file, separately encrypted
  - Immediate access to each patient's data
  - Searching across records is sequential; use massively parallel cloud servers for efficiency

# Health Record Bank Sustainability

- Apps
  - Peace of Mind: Electronic notification of loved ones if record accessed by Emergency Physician
  - Prevention Advisor: Customized automated reminders of needed care (*e.g.*, tests, immunizations)
  - Enable widespread deployment of Health 2.0 apps
- Research Use of Data
  - Finding subjects for clinical trials
  - Anonymized reports with pro-rata revenue sharing with patients
- Population Health
  - Surveillance
  - Targeted prevention interventions

# How Can We Promote Health Record Banks?

- Replace Meaningful Use 3 with Requirement for Electronic Deposit of New Patient Information After Each Care Episode
  - Use existing HL7 CDA/XML standard or FHIR
  - Simplification would be welcomed
  - Would ensure availability of longitudinal records
  - Would spur innovation & entrepreneurship
- Existing HIEs can readily transform into HRBs
- ACOs and Communities can organize HRBs

# Thank you!

- References

- Yasnoff WA et al. Putting Health IT on the Path to Success. *JAMA* 309(10): 989-90, 2013
- Yasnoff WA et al. A Proposal for Financially Sustainable Population Health Organizations. *Pop Health Mgmt* 17(5): 255-6, 2014.
- Yasnoff WA. A Secure and Efficiently Searchable Health Information Architecture. *J Biomed Inform* 61:237-46, 2016

- Email me at: [william.yasnoff@nhiiadvisors.com](mailto:william.yasnoff@nhiiadvisors.com)