The Learning Health System Summit
A Learning Health System for the Nation

Governance
Patient Engagement
Trust
Analysis
Dissemination

Beacon Community
Integrated Delivery System
Health Center Network
State Public Health
Pharmaceutical Firm
Community Practice
Federal Agencies
Health Information Organization
A Learning System Will Make These Things Possible

“17 years to 17 months, or maybe 17 weeks or even 17 hours...“

• Nationwide post-market surveillance of a new drug quickly reveals that personalized dosage algorithms require modification. A modified decision support rule is created and is implemented in EHR systems.

• During an epidemic, new cases reported directly from EHRs. As the disease spreads into new areas, clinicians are alerted.

• A patient faces a difficult medical decision. She bases that decision on the experiences of other patients like her.
The National LHS: *One Infrastructure* that Supports

- **Research**
  - Clinical
  - Comparative effectiveness
  - Translational

- **Public Health**
  - Surveillance
  - Situational Awareness
  - Interventions

- **Quality Improvement**
  - Health process and outcomes research
  - Best practice dissemination
The IOM “Digital Infrastructure” Report

Digital Infrastructure for the Learning Health System: The Foundation for Continuous Improvement in Health and Health Care

“Health and health care are going digital. ...Progress in computational science, information technology, and biomedical and health research methods have made it possible to foresee the emergence of a learning health system which enables both the seamless and efficient delivery of best care practices and the real-time generation and application of new knowledge.”

Available at: www.iom.edu/vsrt
Goal I: Achieve Adoption and Information Exchange through Meaningful Use of Health IT

Goal II: Improve Care, Improve Population Health, and Reduce Health Care Costs through the Use of Health IT

Goal III: Inspire Confidence and Trust in Health IT

Goal IV: Empower Individuals with Health IT to Improve their Health and the Health Care System

Goal V: Achieve Rapid Learning and Technological Advancement

Transform Health Care

Better Information

Better Technology
Current State: An Archipelago
"Carrying the nation the rest of the way to achieving a broadly participatory and functioning learning system will require coordination of effort, within and outside the federal government, of individual organizations that will inevitably be investing their own resources to advance their own capabilities as learning organizations. To the extent that these efforts align with progress toward a national system, they will advance a national agenda as much as each organization’s unique mission.”

From the Archipelago to a Federation: The LHS Summit

Engaging a critical mass of key stakeholders, to be, for the LHS, what Dumbarton Oaks was for the United Nations

- Planning Committee drafts *LHS Principles*
- Review and revision of *Principles* prior to Summit
- Achieve consensus at the Summit
- Endorsement of *Principles* after the Summit
Summit Planning Committee Members

- David Blumenthal, Partners HealthCare
- Adam Clark, MedTran Health Strategies
- Charles Friedman, University of Michigan (Chair)
- Claudia Grossman, Institute of Medicine
- Robert Kolodner, Open Health Tools
- Rebecca Kush, Clinical Data Interchange Standards Consortium
- Allen Lichter, American Society for Clinical Oncology
- Janet Marchibroda, Bipartisan Policy Center
- Michael McGinnis, Institute of Medicine
- Marc Overhage, Siemens Healthcare
- Frank Rockhold, GlaxoSmithKline
- Joshua Rubin, Joseph H. Kanter Family Foundation
- Jonathan Silverstein, NorthShore University HealthSystem
- Richard Tannen, University of Pennsylvania
- James Walker, Geisinger Health System
- Joseph Kanter, ex officio
Stakeholder Groups at the Summit (~ 80 organizations represented)

In no particular order...

- Academic Health Centers and Care Provider Networks
- Advocacy and Consumer Organizations
- Government Agencies
- Payer organizations
- Pharmaceutical Industry
- EHR Vendors
- Philanthropic Organizations
- Professional Associations
- Research Initiatives and Organizations
LHS Principles Document

• Developed by Planning Committee from literature and collective experience
• Shared with Summit participants and revised based on comments received
• Three parts
  1. Core Values underlying an person-centered, national scale LHS
  2. Operational and Design Implications
  3. Coordination with other health IT initiatives
LHS Core Values

1. Person focused
2. Privacy
3. Inclusiveness
4. Openness
5. Reciprocity
6. Adaptability
7. Minimum necessary governance and standardization
8. Cooperative, participatory leadership
Operational and Design Implications

1. Federation
2. Basic kernel of operation
3. Preserving confidentiality
4. Initiatives
5. Minimal movement of data
6. Data custodianship
Finis, and Coming Up...

• David Blumenthal
• Rob Kolodner
• Michael McGinnis