

# Achieving the Vision of an Operational “Learning Health System” by 2024 (or earlier!)

*Deconstructing the Goal of an Operational LHS into the essential elements/tasks and building a critical path timeline with assumptions and assignment of responsibilities for achieving each of the elements/task along the way.*

# The Institute of Medicine (IOM) defines a learning health system as:

“...one in which progress in science, informatics, and care culture align to generate new knowledge as an ongoing, natural byproduct of the care experience, and seamlessly refine and deliver best practices for continuous improvement in health and health care.”



# How will we know when we have arrived?

Health and care professionals are guiding the health and health care (when required) of an individual through information gleaned from the health records and care histories of similar individuals.

# What information on an individual would be useful at the point of interaction?

- **The individual's health and health care history**

- Health status
- Previous encounters and care received
- Current problem list, medications, allergies, etc.
- Family Health History
- DNA Sequence
- Social, Environmental, and Financial Factors
- Current test results
- Etc.

- **Resulting in a “Current Profile of the Individual”**

# What will the LHS be able to provide?

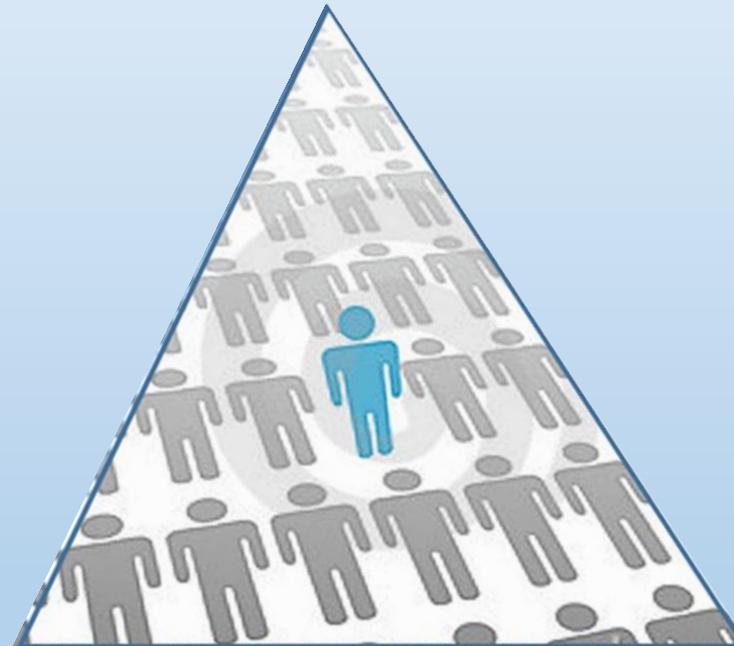
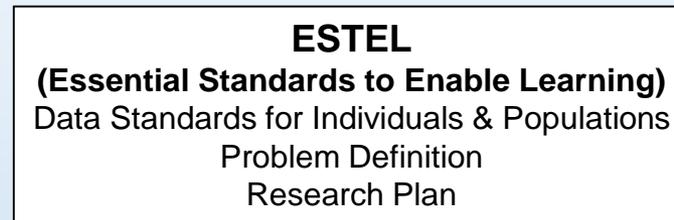
- **Access to records of individuals with similar health and health care profiles**
  - **For health maintenance purposes:**
    - Predictive models of best approaches to exercise, diet, and potential health conditions to monitor for preventive care
  - **For health care purposes:**
    - Similar or matching diagnoses
    - Treatments for those diagnoses
    - Outcomes from those treatments
    - Any side effects from those treatments

# Organization and Presentation of LHS Data for the Use of Health, Health Care Professionals, and Individuals

- **Aggregate data** from a significant set of information sources.
- **Filter and prioritize** resulting data and information to most **efficiently present options** for the professional or individual
- **Capture the results from the use** of LHS data for the health or health care of an individual and provide **results as a new resource point for the LHS**

# A Learning Health System – The Building Blocks:

## *Improving Personal and Population Health through Knowledge*



### **Governance & Policy Framework**

Rules for Data Access & Use  
Policies & Procedures  
Standards Adoption

### **Communications & Education**

Input from Participants and Public  
Journals and Publications  
Messaging Strategy

### **Technology**

Aggregation of Data  
Analysis & Dissemination  
Security Protection

# Questions ???

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