Public Health and the Learning Health System

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March 12, 2013, University of Michigan
Best Care at Lower Cost: The Path to Continuously Learning Health Care in America. Committee on the Learning Health Care System in America; Institute of Medicine. 2012
A Learning Health System

• By 2020, 90% of clinical decisions will be supported by accurate, timely, and up-to-date clinical information and will reflect the best available evidence.*

• Achieve rapid learning and technological advancement.**

*Charter, IOM Roundtable on Value & Science-Driven Health Care
**ONC Federal Health Information Technology Strategic Plan 2011 – 2015 Goal V
- Data
- Information
- Knowledge
- Wisdom
Clinician Practice (MD, DO, DDS, RN)

Patient Knowledge, PHR

Learning about the patient

Past Encounters

Past providers
Consultants
Hospitals
Long-term care
Care team
Organization or Network

Learning how to improve care (Decision Support)

Clinician Practice (MD, DO, DDS, RN)

Patient Knowledge, PHR

Learning about the patient

Past Encounters

Past providers, Consultants, Hospitals, Long-term care, Care team
Learning about many patients

Organization or Network

Learning how to improve care (Decision Support)

Clinician Practice (MD, DO, DDS, RN)

Patient Knowledge, PHR

Learning about the patient

Past Encounters

Past providers, Consultants, Hospitals, Long-term care, Care team
Learning about many patients

Organization or Network

Learning how to improve care (Decision Support)

Patient Knowledge, PHR

Past Encounters

Past providers
Consultants
Hospitals
Long-term care
Care team

Learning about the patient

Research

Learning from research
Learning about many patients

Learning how to improve care (Decision Support)

Learning about the patient

Past Encounters

Past providers Consultants Hospitals Long-term care Care team

Clinician Practice (MD, DO, DDS, RN)

Organization or Network

Public Health

Learning from surveillance

Research

Learning from research

Patient Knowledge, PHR
Learning to Improve Learning: Liquidity, Usability, Overload, Effect
Births and associated data
Congenital disorders
Immunizations
Communicable diseases
Healthcare acquired infections
Reportable test results
Outbreaks
Poisoning
Injuries
Adverse events
Cancer & chronic disease registries
Visits and hospitalizations
Death reports

**Healthcare**

**Public Health**

**Population**
Surveys
Complaints
Reports
Direct care
Enrollment

**Environment**
Sensors
Licenses
Inspections

**Knowledge**

**Information**

**Action** (Policy, Services, Enforcement, Education)
The Health System (current report)

- Community
- Clinical-care delivery system
- Government agencies (other than public health)
- Education sector
- Employers and Business
- The Media

Governmental Public-Health Infrastructure
The Clinical Workflow - Augmented

Clinical context

EHR

Public Health

Job Aids (charts, forms, pocket cards, websites, apps)

Testing

Diagnosis

Mgmt.