Learning Health Systems

Health systems--at any level of scale--become learning systems when they can, continuously and routinely, improve health by marrying discovery to implementation.

https://nam.edu/programs/value-science-driven-health-care/learning-health-system-series/

lhsjournal.com

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Volume 8, Issue 1
The Fundamental Activity: Community-Directed Improvement Cycles of Discovery & Implementation

Discovery
- Assemble Data
- Analyze Data
- Integrate External Evidence

Implementation
- Take Action
- Design Intervention(s)
- Capture Practice as Data

Any Health Problem of Interest

D2K: Data to Knowledge
K2P: Knowledge to Performance
P2D: Performance to Data

Formation of Learning Community
Example: Out of Hospital Cardiac Arrest

Convene Community Deliberative Dialogues

Conduct quantitative & qualitative analyses. Assemble analytical datasets

External Evidence

Develop “HeartSafe Home” initiative

Take Action: Implement HeartSafe Home Initiative

Increase OHCA Survival Rate

Form Learning Community

- Access 911 recordings
- Conduct stakeholder interviews
- Access routinely collected data
Continuity: The Community that Discovers is also the Community that Implements

This

Not This
So What’s New Here? (A lot!)

The LHS approach to health improvement is different from other approaches:

• Embraced uncertainty requiring **discovery**
• Multi-stakeholder learning communities enabling **continuity**
• Infrastructure: shared services that create a **system**
Embracing Uncertainty

- At the outset, the community is not committed to any particular improvement intervention.
- Throughout the cycle, the community advances through co-discovery.
- The learning cycle should start at 5 o’clock and not 12 o’clock.

12 o’clock (no!): the community has been told what to do

5 o’clock (yes!): the community collaboratively discovers what to do
Cycles can enable improvement but do not create a Learning System

Infrastructure enables:

• A large set of simultaneous learning cycles, each run by its own community and addressing a unique problem, to function as a scalable and sustainable system
Learning Systems Everywhere!

Single Organization

Many academic health centers

Network of Organizations

PEDSnet
Genomic LHS
EPInet
ImproveCareNow
LEARRN

States/Provinces/Regions

Indiana
BC
Quebec

Nation

Switzerland
Scotland
U.S. (VA)

Planet

Someday
HILS Online Will Put You at the Head of the Curve

• Making you into an improver who can address any health problem
• Connecting you to a transformational idea that is growing by the day
• Giving you a credential from a nationally renowned university that can open career doors