

The Learning Healthcare System

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INSTITUTE OF MEDICINE

OF THE NATIONAL ACADEMIES

Advising the nation / Improving health

Some motivating numbers...

0.1

2.5

3-20

7

16

30

41

55

70

177

200

1000

A bit more context...

0.1%

\$2.5

3-20x

\$7K

16%

30%

#41

55%

70K

\$177

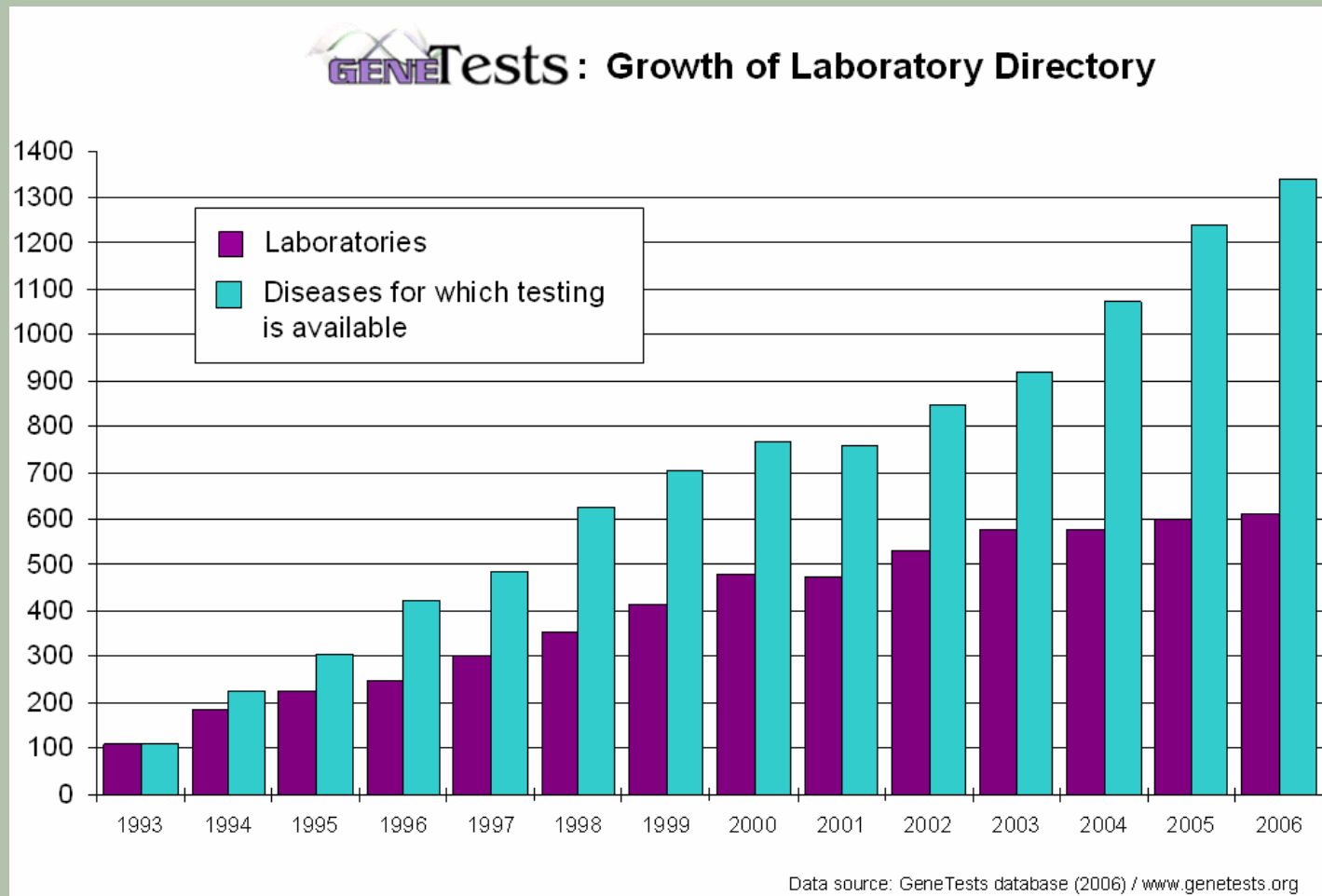
\$200K

1000

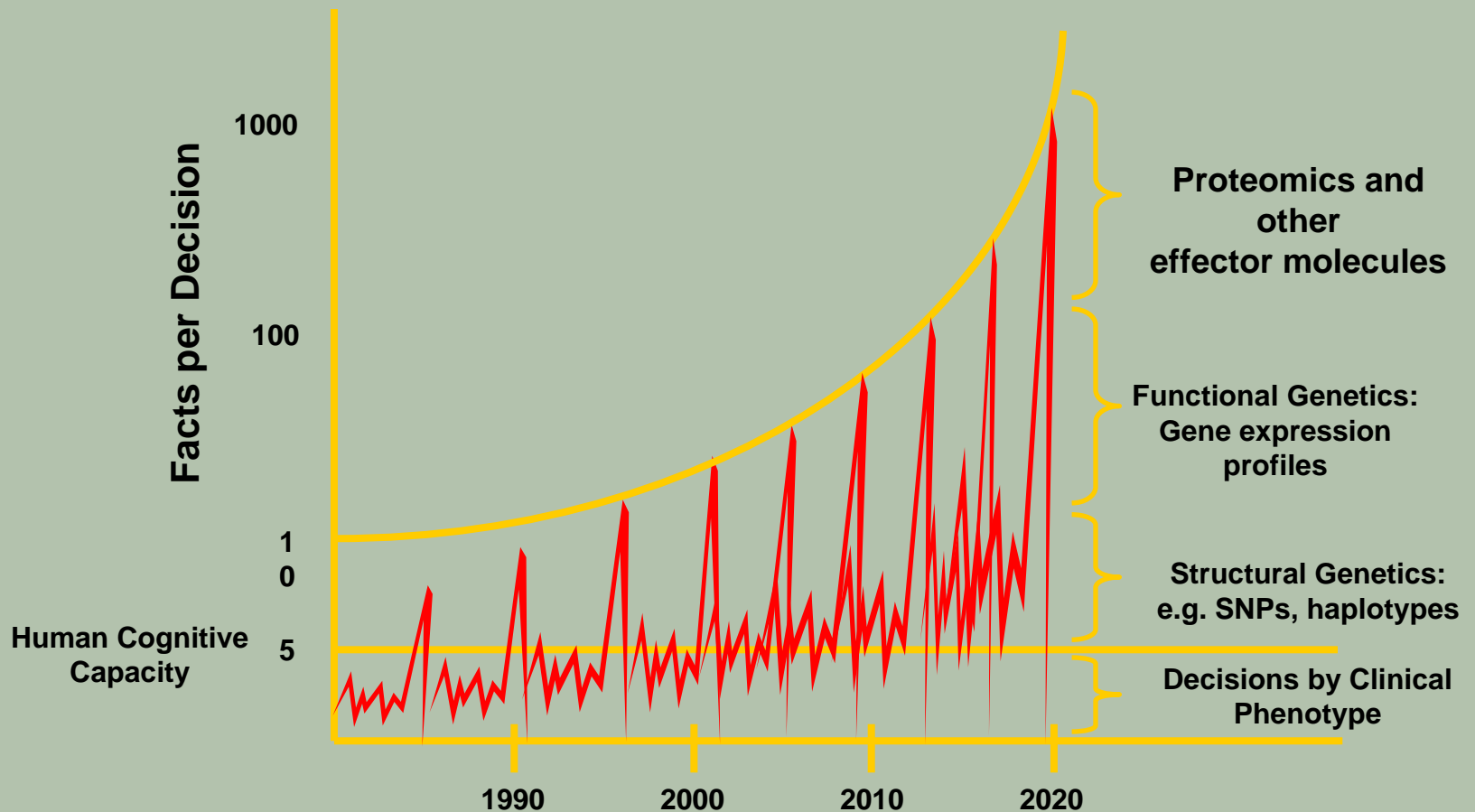
The full unabridged reality...

0.1% invested in assessment
\$2.5 trillion spent on health care
3-20x service variation by geography
\$7K per year per person
16% of GDP devoted to health
30% \$ that cannot improve health
#41 health quality rank in world
55% needed services delivered
70K deaths from medical errors
\$177 billion to treat med probs
\$200K per bone marrow transplant
1000 variables per encounter

Genetics Tests for 1500 Diseases

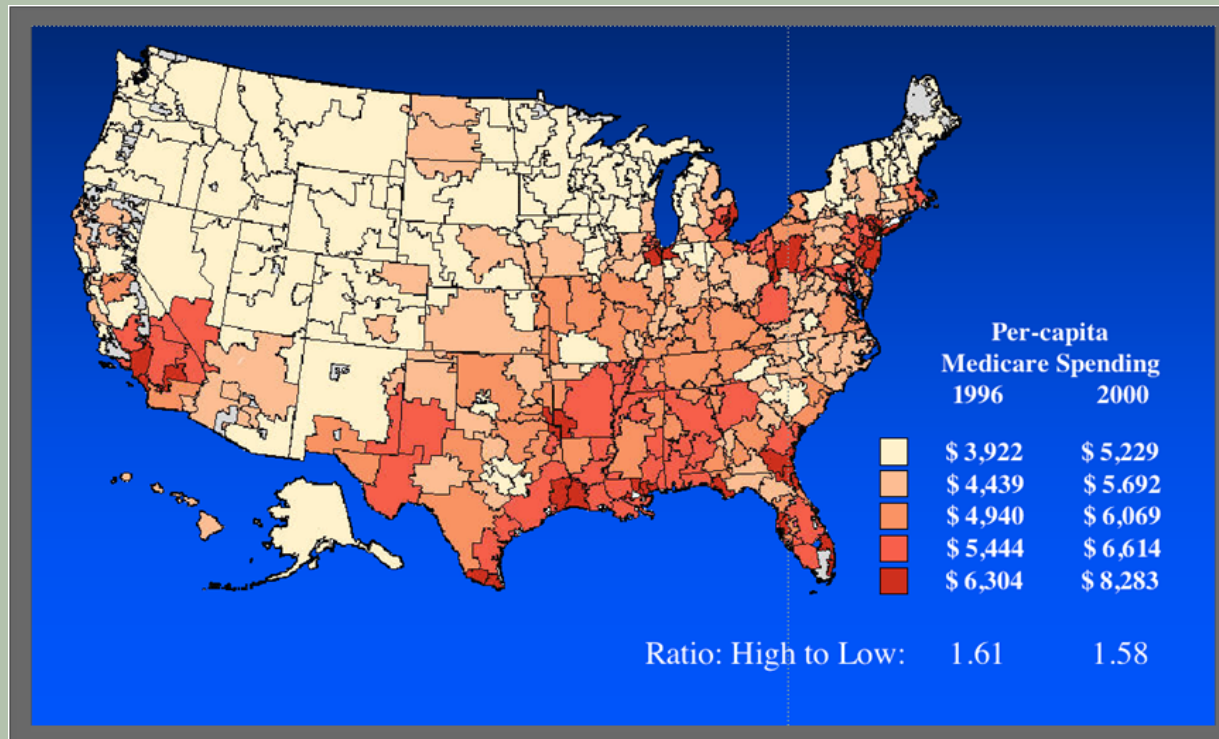


Challenge to Providers



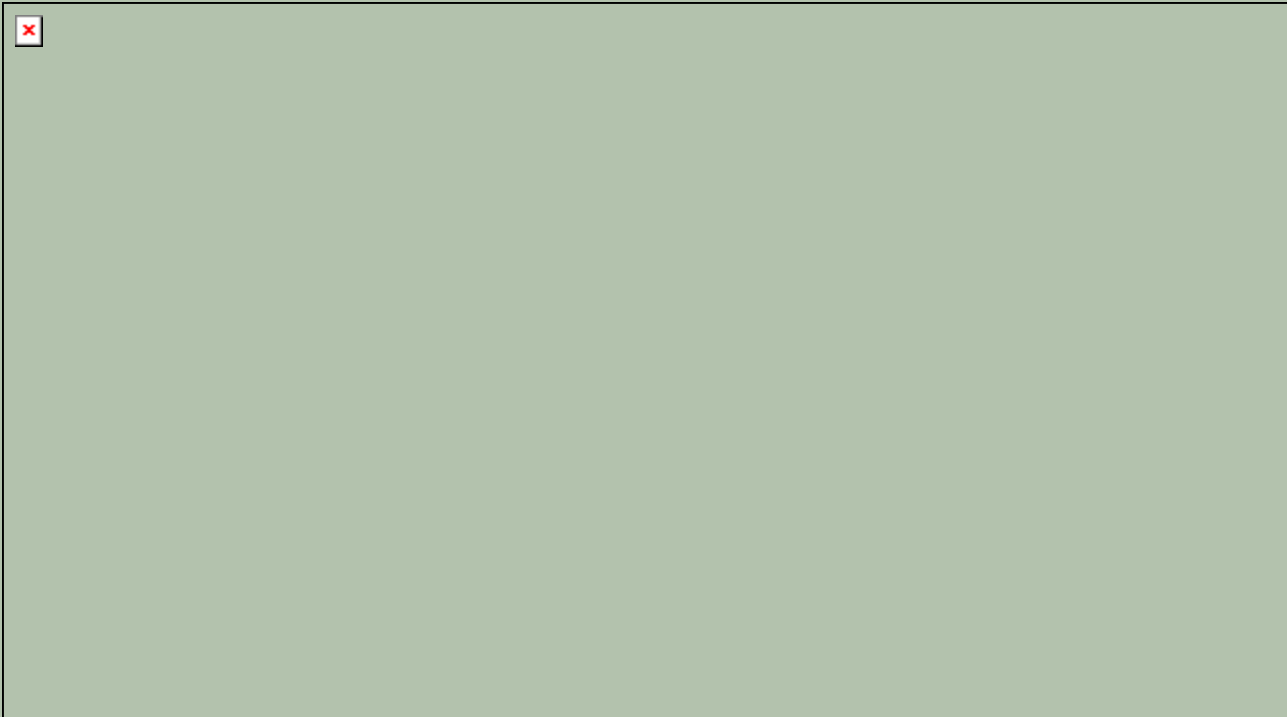
William Stead, IOM Meeting, 8 October 2007. Growth in facts affecting provider decisions versus human cognitive capacity.

Consequences for Practice



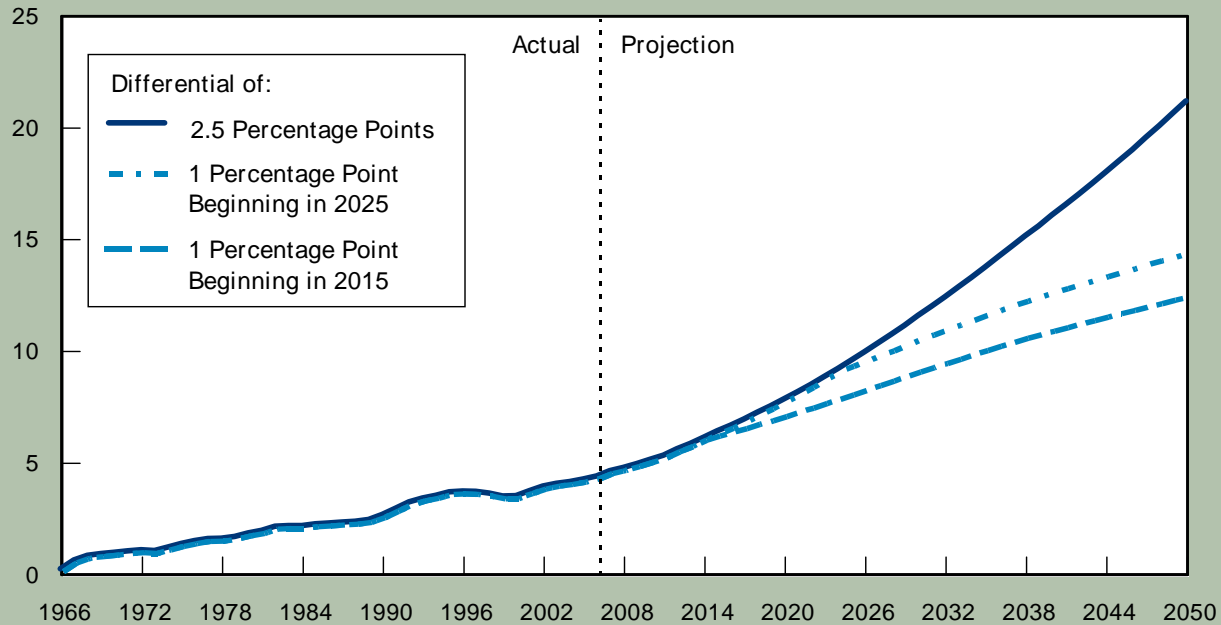
Elliot Fisher, IOM Meeting, 8 October 2007. Wide geographic variation in per capita Medicare spending, 2003.

Consequences for Value



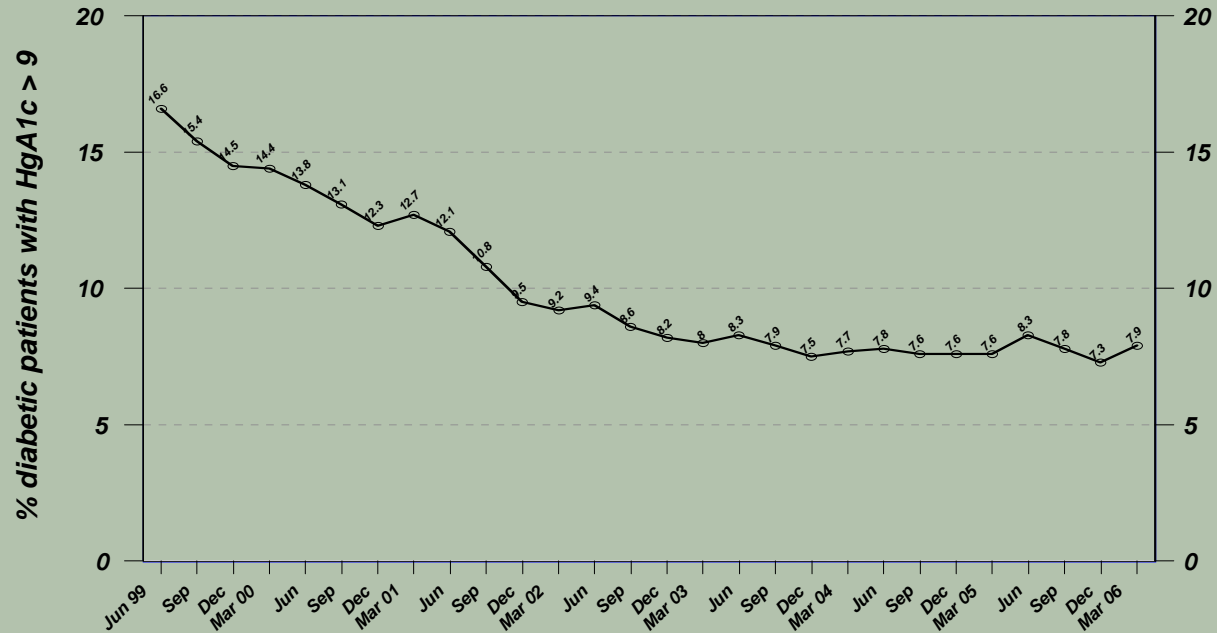
Peter Orszag (citing Dartmouth), IOM Meeting, 8 October 2007. Inverse relationship between per capita Medicare spending and hospital quality ranking, 2000-2001.

Implications for the Economy



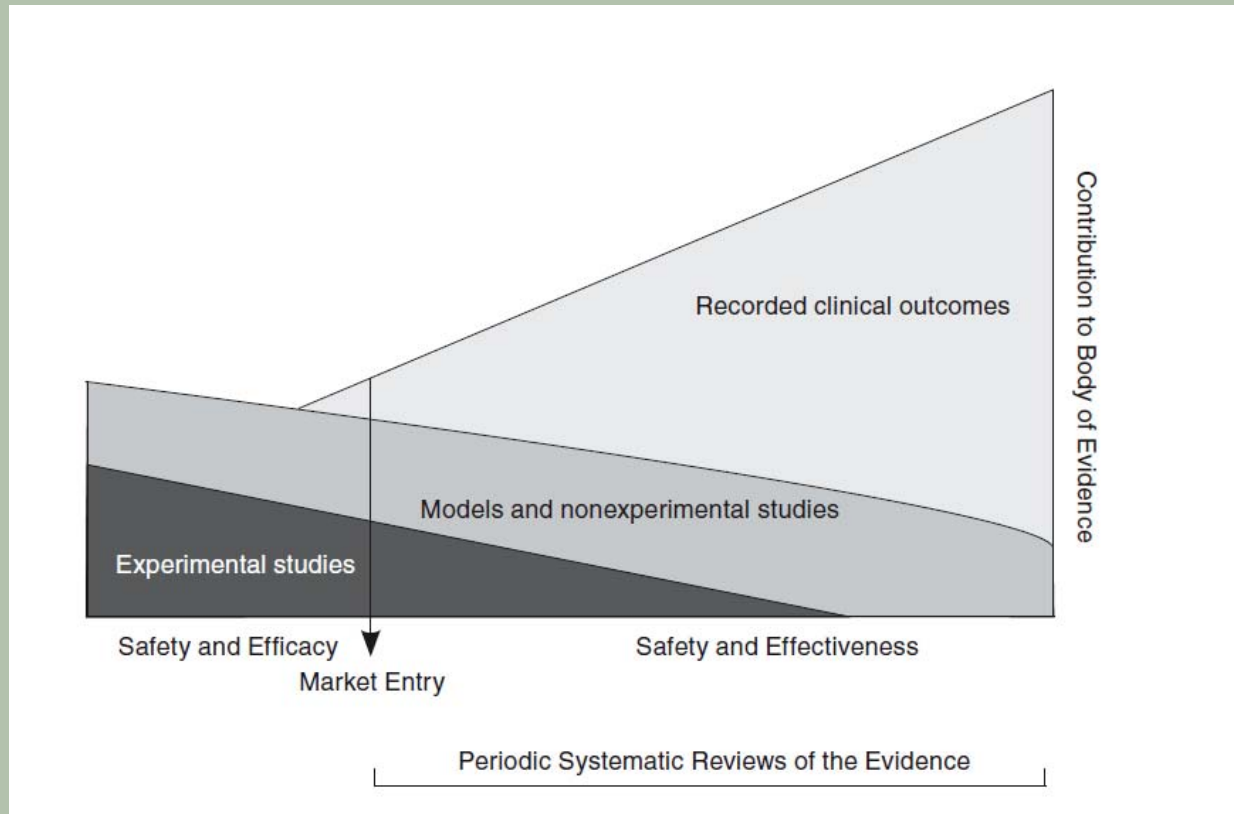
Peter Orszag, IOM Meeting, 8 October 2007. Scenarios for growth in share of GDP for Medicare and Medicaid spending.

Bringing Learning to Practice



Brent James, IOM Meeting, 20 July 2006. Improvements in diabetes control with systematic clinical program management.

Emerging Research Paradigm



Top 10 Forces Shaping Our Health Scene

10: Innovation in clinical technologies.

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9: Potential for bioterrorism.

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- 1: The patient at the center.

Learning Healthcare System

Health and healthcare in which continuous improvement in performance and outcomes result from knowledge *generation* that is an integral and seamless product of the delivery process and knowledge *delivery* that is an integral and seamless feature of the decision process.

Features of a Learning Healthcare System

- Learning-driven care
- Care-driven learning
- Clinician as steward
- Patient as partner at the center
- Best practice every time
- Seamless cycle feedback
- Continuous improvement
- Clinical data a public trust
- IT-based knowledge engine
- Networked leadership

IOM Roundtable Charter

“We seek the development of a **learning healthcare system** designed to generate and apply the best evidence for the collaborative health care choices of each patient and provider; to drive the process of discovery as a natural outgrowth of patient care; and to ensure innovation, quality, safety, and value in health care.”

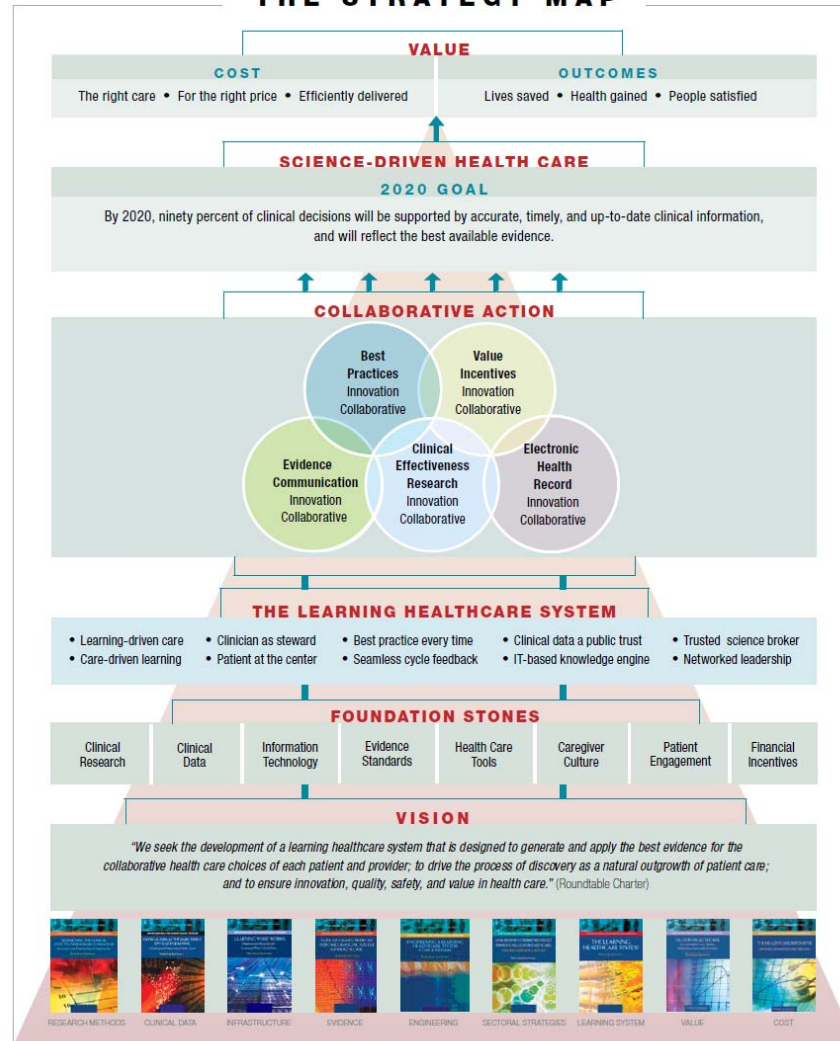
IOM Roundtable Goal

By the year 2020, *ninety percent of clinical decisions* will be supported by accurate, timely, and up-to-date clinical information, and will reflect the best available evidence

IOM Roundtable Charter

IOM ROUNDTABLE ON VALUE & SCIENCE-DRIVEN HEALTH CARE

THE STRATEGY MAP



Institute of Medicine of the National Academy of Sciences

IOM Roundtable on Value & Science-Driven Health Care
www.iom.edu/vsrt