21st Century Health Care: The "Right Stuff"

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- **Medicine Takes Off**
- How We Make Progress
- Transformation Framework

Aviation: Back Then

Basic efficacy was accomplished, but there were no systems for safety and quality

The ‘Wright Flyer,’ the first manned flight: 1903

Aviation: Advancing Science

Doppler radar technology: flying had become safer, but crashes and malfunctions were still common

Radio technology for communication

Bombs had approximately 7 percent accuracy rate

World War II era

Aviation: Today

- Seamless team communication
- Training is continuous and includes simulation
- Precision-guided munitions
- Crashes are extremely rare

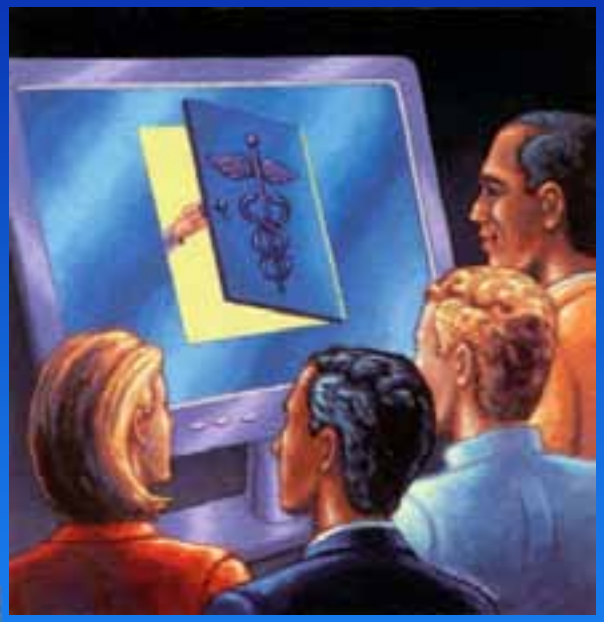
Do We Have The "Right Stuff?"

- We are past the Wright Brothers stage
- We have not reached the systems-based approach that creates a consistently high quality experience
- We need information infrastructure and support to achieve this goal

Imagine… in ≤ 5 Years

68-year-old male with diabetes and hypertension

- PHR linked to EHR
- E-messaging and E-prescriptions
- Quality measured and reported electronically
- Measures increasingly focus on quality and value outcomes over episodes of care
- Best practices to improve outcomes shared among providers and patients
- Comparative effectiveness evidence to guide treatment
- Patient registries
- Payer incentives reward the physician *and* the patient



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A Vision of Transforming Health Care

- Health IT
- Comparative effectiveness
- Medical education and training
- Quality measurement
- Quality improvement networks
- Safety First
- Alignment of incentives

Foundation of Health IT Infrastructure

- Health IT will enable quality improvement
- Automating inefficiencies will not improve outcomes
- Implementation without consideration of workflow and patient experience could be extremely harmful

Comparative Effectiveness

- Our deficiency in understanding effectiveness among preventative, diagnostic, and treatment options hampers our ability to deliver high value care
- As we build this knowledge, we need to determine how to incorporate into decision-making and measure the results

Goal: to develop and disseminate better evidence about benefits and risks of alternative choices

Medical Education and Training

- From information mastery to information *management*
- Continuous learning and the ability to access and understand information
- Simulation will replace “see one, do one, teach one”
- Additional training to understand system redesign, quality improvement, and comparative effectiveness

Quality Measurement

- Needs to be coordinated through collaborative efforts
- Providers, patients, and payers should inform measure development, use, and enhancement
- Data should be collected at the point of care
- Measures must address coordination of care, efficiency, and patient-centered outcomes

Quality Improvement Networks

- Networks can help providers measure and report
- Networks can implement change and measure results
- The practice of medicine then becomes a learning network
- We must learn how to test interventions, redesign systems and spread successful interventions

Safety

- Current focus (detecting errors and causes, and interventions in piecemeal fashion, if at all) needs to evolve
- Need to test system-based interventions
- Health IT will play a major role in systems designed to decrease harm

Incentives

- Incentives need to be aligned to reward quality and value
- Payment based on volume of services delivered will end
- The research and provider community need to engage in the development of quality and value measures quickly

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Transformation

How do we transform a system accounting for 16 percent of our economy?

- We need a roadmap
- Need to rethink our training, measurement and system design
- Change reward system

The "3T's" Road Map to Transforming U.S. Health Care

Basic biomedical science ↔ **T1** ↔ Clinical efficacy knowledge ↔ **T2** ↔ Clinical effectiveness knowledge ↔ **T3** → **Improved health care quality and value and population health**

Key T1 activity to test what care works

Clinical efficacy research

Key T2 activities to test who benefits from promising care

Outcomes research

Comparative effectiveness research

Health services research

Key T3 activities to test how to deliver high-quality care reliably and in all settings

Measurement and accountability of health care quality and cost

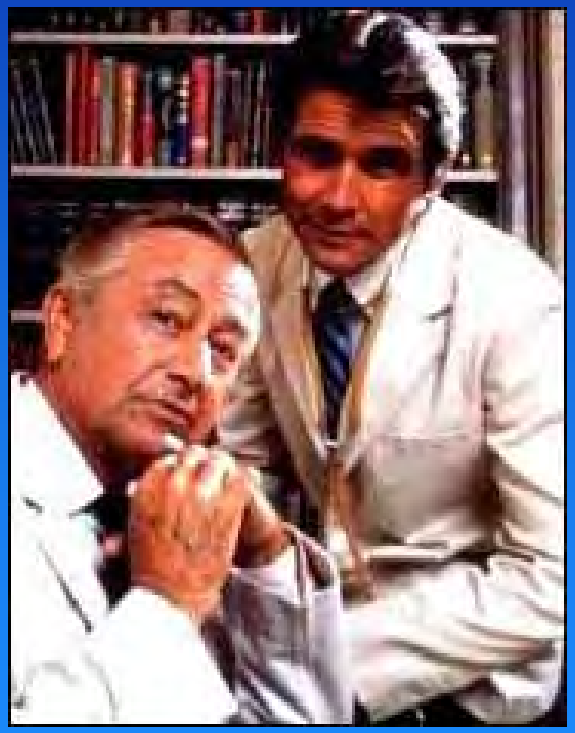
Implementation of Interventions and health care system redesign

Scaling and spread of effective interventions

Research in above domains

Source: JAMA, May 21, 2008: D. Dougherty and P.H. Conway, pp. 2319-2321. The "3T's Roadmap to Transform U.S. Health Care: The 'How' of High-Quality Care."

Transformation in Culture



Health Care GPS

Seeing the Forest…
…and the Trees

- A robust health care system must include capacity for:
  - Rapid translation of beneficial advances or breakthroughs
  - Connectivity with the biomedical enterprise

Achievability: What can work under ideal circumstances for some people

Reliability: Getting it right for all patients every time – the first time

The Bottom Line

- Success for ‘meaningful use’ = improved quality, outcomes and value
- Emphasize and incentivize data sharing as essential step to care coordination
- Create policy interoperability
- Tailor investments to stage of adoption
- Meaningful use is a destination – and a journey