

**16th Annual National Forum on Quality Improvement in Health Care**  
World Center Marriott Resort & Convention Center, Orlando, Florida  
Tuesday, 13 December 2005, 9:30a - 10:45a

- Miniplenary Session A1 -

## **Meet in the Middle: Key Infrastructure to Drive Organizational Change**

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## **The emergence of modern medicine**

***~1860 - 1910:***

- ◆ ***new high standards for clinical education***
- ◆ ***strict requirements for professional licensing***
- ◆ ***new internal organization for hospitals***
- ◆ ***clinical practice founded on scientific research***

## 1912 : The 'Great Divide'

***"... for the first time in human history, a random patient with a random disease consulting a doctor chosen at random stands a better than 50/50 chance of benefitting from the encounter."***

***Harvard Professor L. Henderson***

(Harris, Richard. *A Sacred Trust*. New York, NY: New American Library, 1966)

## Current health care

***is the best the world has ever seen***

***A few simple examples:***

- ◆ ***From 1900 to 2000, average life expectancy at birth increased from only 49 years to almost 80 years.***
- ◆ ***Since 1960, age-adjusted mortality from heart disease (#1) has decreased by 56%; and (from 307.4 to 134.6 deaths / 100,000)***
- ◆ ***Since 1950, age-adjusted mortality from stroke (#3) has decreased by 70%. (from 88.8 to 26.5 deaths / 100,000)***

***Initial life expectancy gains almost all resulted from public health initiatives -- clean water, safe food, and (especially) widespread control of epidemic infectious disease. But since about 1960, direct disease treatment has made increasingly large contributions.***

Centers for Disease Control. Decline in deaths from heart disease and stroke--United States, 1900-1999. *JAMA* 1999; 282(8):724-6 (Aug 25).

National Center for Health Statistics. *Health, United States, 2000 with Adolescent Health Chartbook*. Hyattsville, MD: U.S. Dept. of Health and Human Services, Center for Disease Control and Prevention, 2000; pg. 7 (DHHS Publication No. (PHS) 2000-1232-1).

U.S. Department of Health and Human Services, Public Health Service. *Healthy People 2000: National Health Promotion and Disease Prevention Objectives*. Washington, DC: U.S. Government Printing Office, 1991 (DHHS Publication No. (PHS) 91-50212).

# **The healer's modern role**

- 1. *Explain the present***
- 2. *Predict the future***
- 3. *Change the future***

***Medicine used to be simple,  
ineffective, and relatively safe.***

***Now it is complex, effective,  
and potentially dangerous.***

*Sir Cyril Chantler*

Neal G. Reducing risks in the practice of hospital general medicine. In *Clinical Risk Management, 2nd edition*. British Medical Journal, 2001.  
Chantler, Cyril. The role and education of doctors in the delivery of health care. *Lancet* 1999; 353:1178-81.

# **Medical injuries**

**Account for  
44,000 - 98,000 preventable deaths per year  
in the United States**

**More people die from medical injuries than from  
breast cancer or AIDS or motor vehicle accidents**

Brennan et al. *New Engl J Med* 1991

Thomas et al. 1999

**American health care  
"gets it right"  
54.9%  
of the time.**

*(measures of underuse, mostly)*

McGlynn EA, Asch SM, Adams J, *et al.* The quality of health care delivered to adults in the United States. *N Engl J Med* 2003; 348(26):2635-45 (June 26).

# Dr. John Wennberg

★ **Geography is destiny** ("Who you see is what you get" \*)

★ **There is no health care "system"**

★ **Supplier-induced demand:**

- ◆ *Field of Dreams approach: Build it and they will come*
- ◆ *James T. Kirk: Do something, Bones! She's dying!*
- ◆ *Eddy: More is better -- if it might work, do it*
- ◆ *Chassin: Enthusiasm for unproven methods*
- ◆ *Boston City / Boston University Hospital, 1998:*
  - ▶ *Same housestaff on both services*
  - ▶ *More beds / easier access to resources on Boston University service*
  - ▶ *Boston University readmit rate ~50% higher*

\* *Richard Deyo, MD, MPH - in: Cherken, Deyo, Wheeler and Ciol. Physician variation in diagnostic testing for low back pain. Arth & Rheum 1994; 37(1):15-22 (Jan).*

## Are most injuries unavoidable?

***The price we pay***

***(for)***

***diseases of medical progress***

Blendon, Robert J. *et al.* Views of practicing physicians and the public on medical errors. *N Engl J Med* 2002; 347(24):1933-40 (Dec 12).

Barr, David. Hazards of modern diagnosis and therapy - the price we pay. *JAMA* 1955; 159(115):1452-6 (Dec 10).

Moser, Robert H. Diseases of medical progress. *N Engl J Med* 1956; 255(13):606-14 (Sep 27).

# Controlling complexity

**Subspecialize** (*analytic method; reductionism; 'divide and conquer'*)  
(old joke: Know more and more about less and less until  
you know everything about nothing)

**Mass customize** (*a shared baseline: focus on that relatively  
small subset of factors that are unique by and for each individual  
patient [typically 5-15%], concentrating your most important resource --  
the trained human mind -- where it can have the greatest impact*)

# Protocols can improve care

*A multidisciplinary team of health professionals -*

- 1. Select a high priority care process**
- 2. Generate an evidence-based "best practice" guideline**
- 3. Blend the guideline into the flow of clinical work**
  - ◆ *staffing*
  - ◆ *training*
  - ◆ *supplies*
  - ◆ *physical layout*
  - ◆ *measurement / information flow*
  - ◆ *educational materials*
- 4. Use the guideline as a shared baseline, with clinicians free to vary based on individual patient needs**
- 5. Measure, learn from, and (over time) eliminate variation arising from professionals; retain variation arising from patients ("mass customization")**

# Why "profession-based" practice?

- 1. It produces better outcomes for our patients*
- 2. It eliminates waste, reduces costs, and increases available resources for patient care*
- 3. It puts the caring professions back in control of care delivery*
- 4. It is the foundation for useful shared electronic data -- an important next step in care delivery improvement*

## The health professions are changing

### *From craft-based practice*

- ♦ individual physicians, working alone (housestaff ::= apprentices)*
- ♦ handcraft a customized solution for each patient*
- ♦ based on a core ethical commitment to the patient and*
- ♦ vast personal knowledge gained from training and experience*

### *To profession-based practice*

- ♦ groups of peers, treating similar patients in a shared setting*
- ♦ plan coordinated care delivery processes (e.g., standing order sets)*
- ♦ which individual clinicians adapt to specific patient needs*
- ♦ early experience shows*
  - less expensive (facility can staff, train, supply and organize to a single core process)*
  - less complex (which means fewer mistakes and dropped handoffs, less conflict)*
  - better patient outcomes*

# Peabody and Scientific Medicine

*In 1926, [Peabody] presented to Harvard medical students a series of talks that reviewed the essentials of medical care in light of the new "scientific medicine" that was at that time exciting the world of academic medicine.*

*He emphasized the humanitarian needs of sick people and concluded that*

*the essence of patient care is caring for the patient.*

***"The treatment of a disease must be completely impersonal; the treatment of a patient must be completely personal."***

From New England Journal of Medicine book review of *The Caring Physician: The Life of Dr. Francis W. Peabody* (<http://content.nejm.org/cgi/content/full/328/11/817>).

## Three parallel lines of evidence

- 1. Patient responses to outcome rankings***
- 2. The Rule of Rescue (ed psych literature)***
- 3. Mulley and Wennberg: shared decision making***

# New York CABG mortality release

*% of all CABGs in New York State*

<u>Year</u>	<u>Best Hospitals</u>		<u>Worst Hospitals</u>	
	<u>Year Before</u>	<u>Year After</u>	<u>Year Before</u>	<u>Year After</u>
1989	16.7	16.3	7.8	9.1
1990	14.6	15.2	6.8	6.9
1991	1.6	1.4	8.4	7.8
1992	3.6	3.5	3.2	3.1
1993	14.2	13.0	10.6	10.8
1994	13.1	13.3	0.5	0.5

## HCFA mortality reports

**1984 - 1992 annual HCFA hospital mortality reports;  
hospitals with twice the expected mortality rate:**

***Discharges fell by < 1 per week (<1%)***

**Press reports of single, unexpected deaths:**

***Discharges fell by 9%***

Mennemeyer ST, Morrisey MA, Howard LZ. Death and reputation: how consumers acted upon HCFA mortality information. *Inquiry* 1997; 34:117-128 (Summer).

See also (very nice review):

Naylor CD. Public profiling of clinical performance. *JAMA* 2002; 287(10):1324-5 (March 13).

# The Rule of Rescue

- ♦ *subconscious personal identification at an emotional level;*
- ♦ *a person instead of just a number;*
- ♦ *a name and a face*
  - *The child down the well*
  - *The whales trapped in the ice*
  - *The dog on the abandoned boat*
  - *"60 Minutes" program on pertussis vaccination*

**"A single death is a tragedy, a million deaths is a statistic."**

*Joseph Stalin (who killed more than 17 million of his own Russian people)*

**Stories** *(the Rule of Rescue)*

trump

**statistics** *(performance reports);*

**Relationships**

trump

**Stories**

***I don't care how much you know,  
until I know how much you care.***

## **Patients' quality factors**

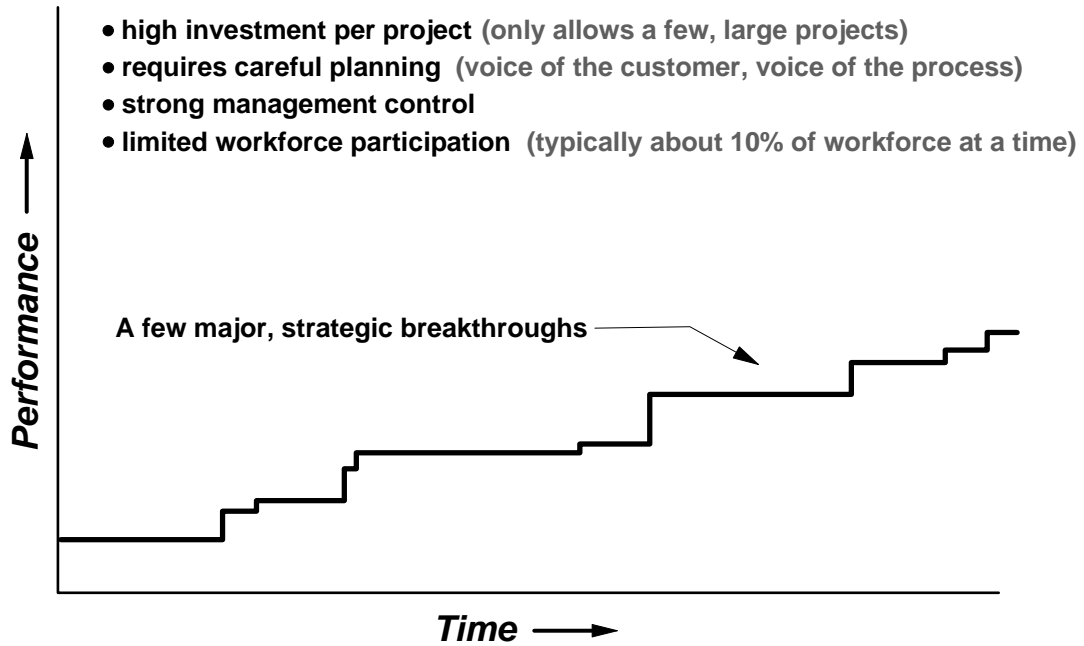
- ▶ Hospital cleanliness
- ▶ Smoothness of admission / discharge
- ▶ Accuracy and clarity of billing statements
- ▶ Courtesy of hospital employees
- ▶ Response times for calls & requests
- ▶ Level of technology available
- ▶ Nurse competency
- ▶ Availability of physician specialists
- ▶ "Track record" for medical complications
- ▶ Availability of good emergency care
- ▶ Price
- ▶ Taste and temperature of food

**(Many are surrogates -- indicators --  
for medical outcomes)**

## **Service quality**

***Frontline caregivers perception of quality,  
as reflected in work morale, creativity, and  
local control (ability to modify local systems on behalf of patients)  
WILL be transmitted to your patients.***

# Breakthrough improvement



# Incremental improvement

