

**AHA Task Force on Variation in Health Care Spending**  
Chicago, Illinois (by two-way interactive video)  
Wednesday, 10 February 2010 -- 2:00p - 2:20p

# **Managing Clinical Variation at Intermountain: Better Patient Outcomes, Lower Costs**

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*Life is short, the art is long,  
opportunity fleeting, experience treacherous,  
judgment difficult.*

*Hippocrates*

***Some circumstances are a little more tractable:***

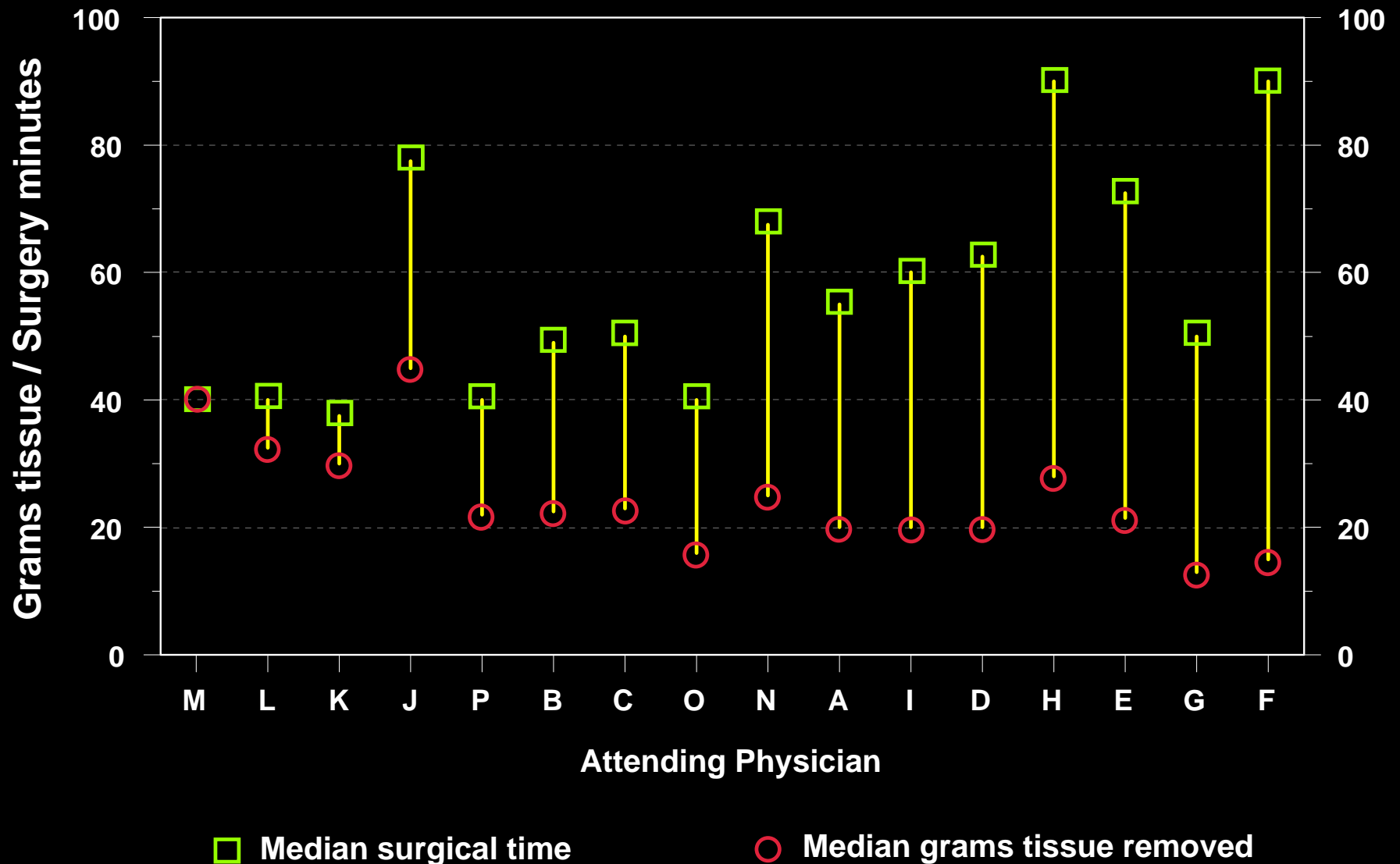
- ♦ ***parallel tracks of evidence point to the same conclusions ...***
- ♦ ***actions taken on the foundation of the those conclusions produce convincing, positive results***

# Quality, Utilization, & Efficiency (QUE)

- ◆ **Six clinical areas studied over 2 years:**
  - transurethral prostatectomy (TURP)
  - open cholecystectomy
  - total hip arthroplasty
  - coronary artery bypass graft surgery (CABG)
  - permanent pacemaker implantation
  - community-acquired pneumonia
- ◆ **pulled all patients treated over a defined time period**  
*across all Intermountain inpatient facilities - typically 1 year*
- ◆ **identified and staged** *(relative to changes in expected utilization)*
  - severity of presenting primary condition
  - all comorbidities on admission
  - every complication
  - measures of long term outcomes
- ◆ **compared physicians with meaningful # of cases**  
*(low volume physicians included in parallel analysis, as a group)*

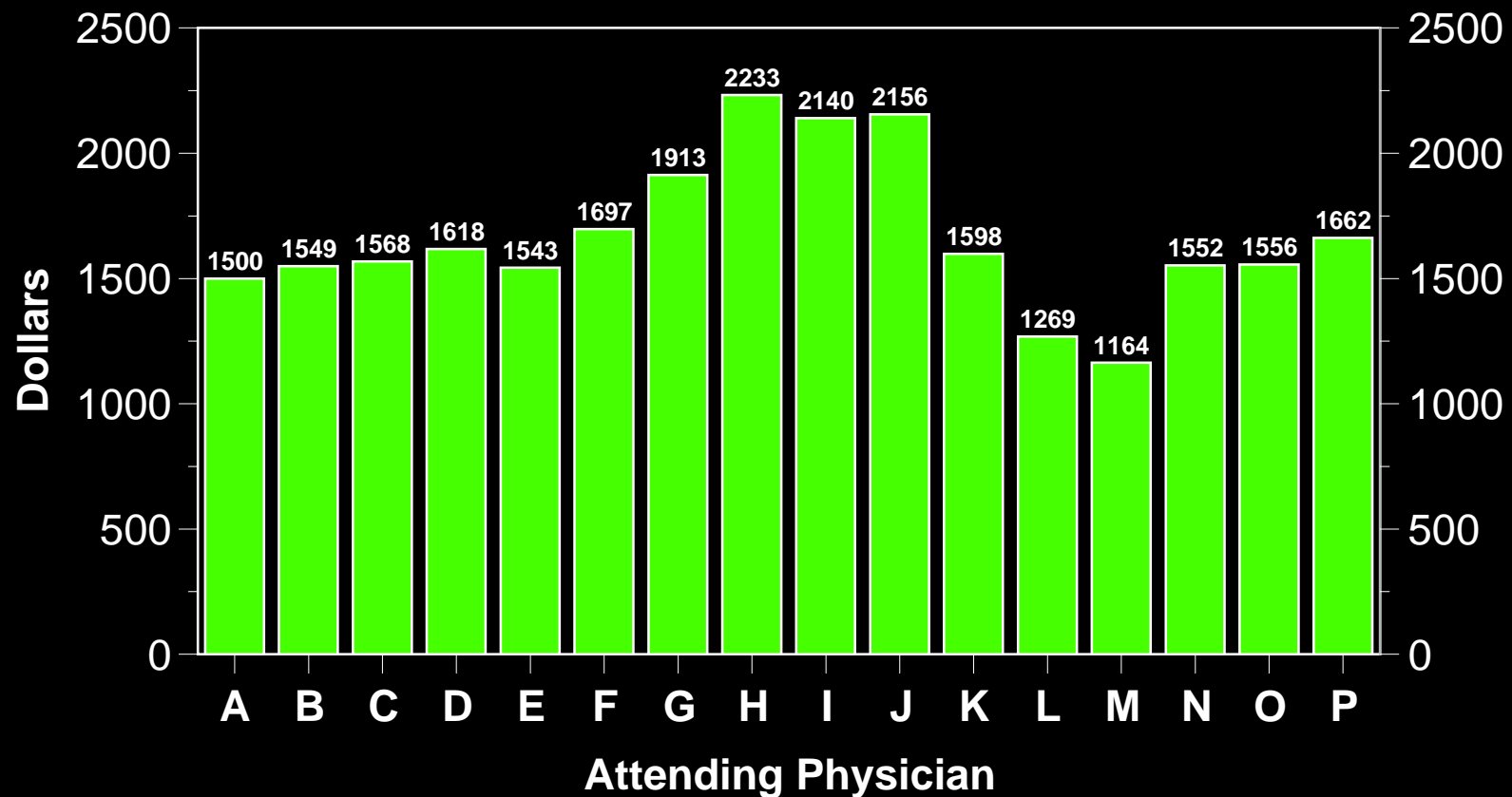
# IHC TURP QUE Study

## Median Surgery Minutes vs Median Grams Tissue

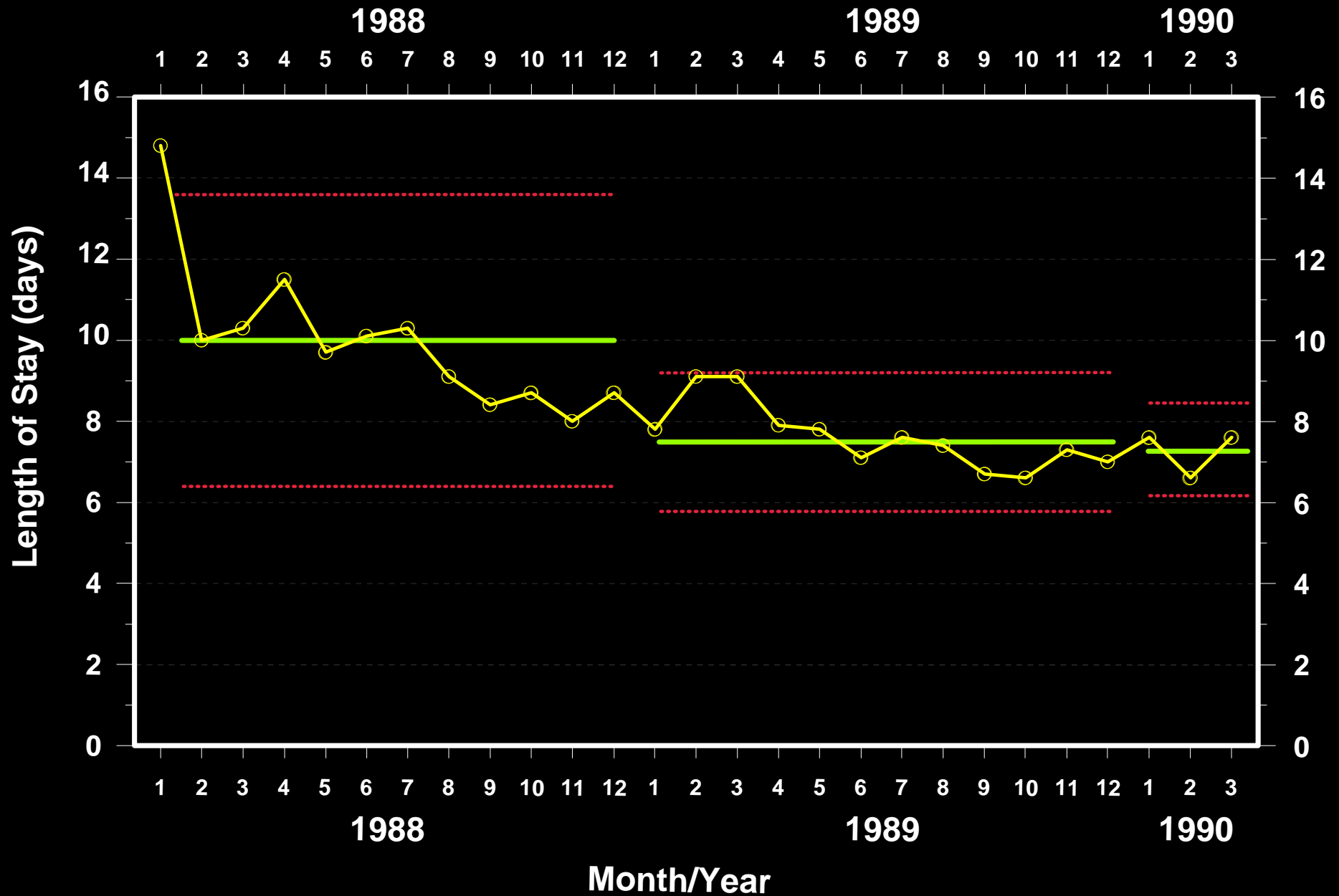


# IHC TURP QUE Study

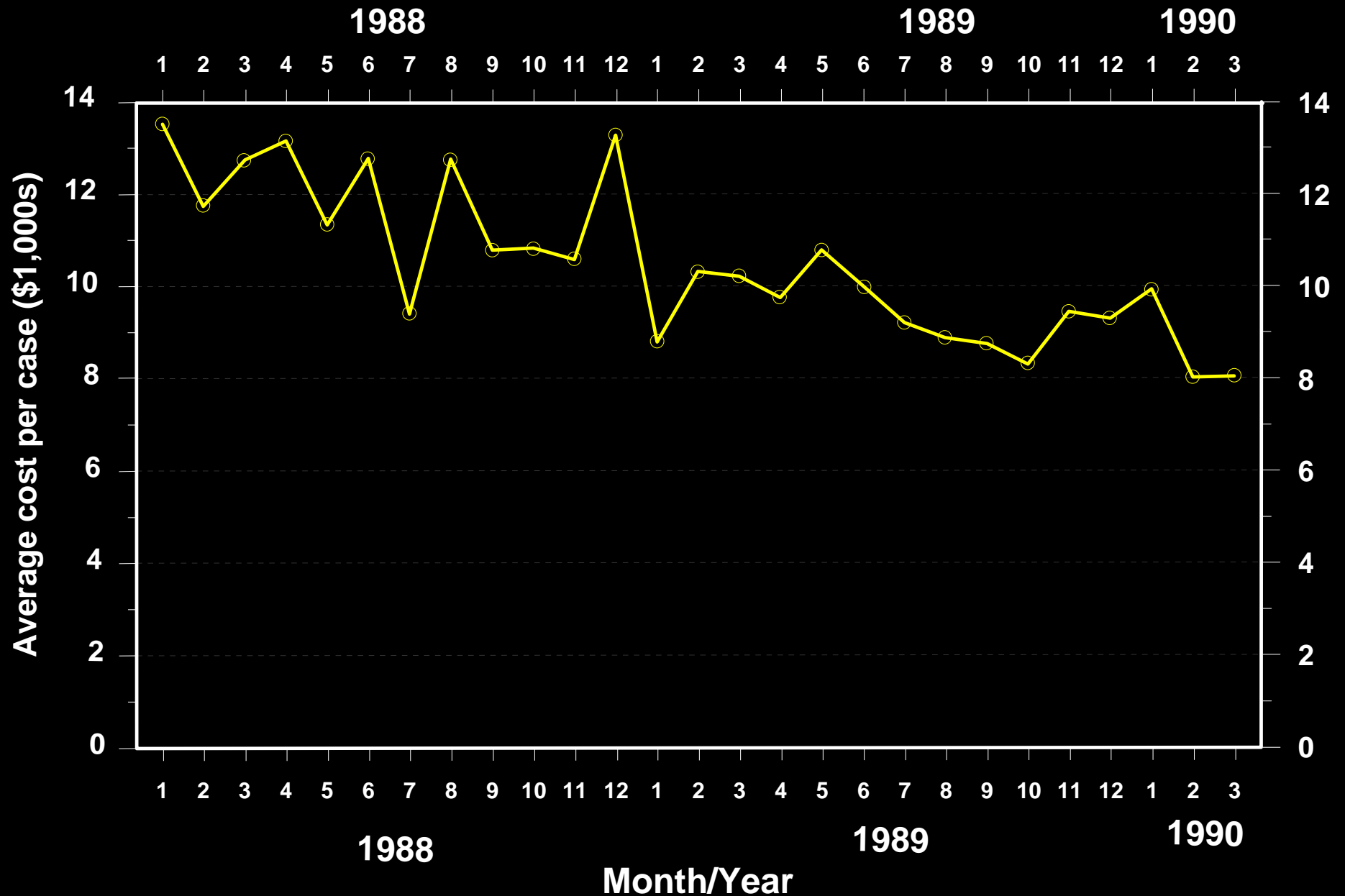
## Average Hospital Cost



# Total Hip Arthroplasty - LOS



# Total Hip Arthroplasty - Cost



# W. Edwards Deming

**Quality** *(physical outcomes)* **controls cost**

More accurately,

*Quality and cost are two sides of  
the same coin ...*

*anything you do to one affects  
the other*

*(similarly, cost controls access)*



# We have found proven solutions

## **Shared baselines** (a form of Lean Production) -

*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*
  - ◆ *educational materials*
  - ◆ *measurement / information flow*
- 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"*)

# Practical limitations on protocol use

*When abstract guidelines hit real patient care, experience clearly shows that (with very rare exception)*

**No protocol fits every patient;**

*more important,*

**No protocol (perfectly) fits any patient.**

**Clinicians:** *We don't just allow, or even encourage, but demand that you adapt any shared baseline protocol to your individual patient needs.*

*Shared Baselines are, primarily, very efficient variation measurement tools for use within a process-focused Learning Network.*

# Physicians

*It is more important that you do it the same  
than that you do it "right"*

*When you "do it the same:"*

- ◆ **error rates fall** -- *less complexity = fewer mistakes = better outcomes*
- ◆ **costs fall** -- *staff is more efficient; you more are efficient*
- ◆ **you can apply the scientific method to systematically improve** -- *regardless of where you start, you will end up with best demonstrated care practices*

*(Truth is found more often from mistakes than from confusion ...)*

*Francis Bacon (1561 - 1626)*

# No good deed goes unpunished

- ◆ **Neonates > 33 weeks gestational age who develop respiratory distress syndrome**
- ◆ **Treat at birth hospital with nasal CPAP** (prevents alveolar collapse), **oxygen, +/- surfactant**
- ◆ **Transport to NICU declined from 78% to 18%.**
- ◆ **Financial impact** (NOI; ~110 patients per year; raw \$):

	<u>Before</u>	<u>After</u>	<u>Net</u>
<b>Birth hospital</b>	84,244	553,479	469,235
<b>Transport (staff only)</b>	22,199	- 27,222	- 49,421
<b>Tertiary (NICU) hospital</b>	<u>958,467</u>	<u>209,829</u>	<u>-748,638</u>
<b>Delivery system total</b>	1,064,910	736,086	-328,824
<b>Integrated health plan</b>	900,599	512,120	388,479
<b>Medicaid</b>	652,103	373,735	278,368
<b>Other commercial payers</b>	<u>429,101</u>	<u>223,215</u>	<u>205,886</u>
<b>Payer total</b>	1,981,803	1,109,070	872,733

# Payment systems

**are a direct expression of social value**

## ***Current U.S. payment systems:***

- *pay health care providers to harm patients*
- *financially punish innovation that increases value*  
*(improve patient outcomes while reducing costs)*
- *provide strong incentives to "do more" (higher utilization),*  
*even for services that offer small or negative results*

***as reflected in the measured performance  
of the health care delivery system***

# Care falls short of its theoretic potential

- 1. Well-documented, massive, variation in practices**  
*(beyond the level where it is even remotely possible that all patients are receiving good care)*
- 2. High rates of inappropriate care**
- 3. Unacceptable rates of preventable care-associated patient injury and death**
- 4. A striking inability to "do what we know works"**
- 5. Huge amounts of waste and spiraling prices, that limit access** *(46.6 million uninsured Americans, and still climbing)*