

Kansas Healthcare Collaborative
3rd Annual Summit on Quality
Sheraton Hotel, Overland Park, Kansas
Friday, 21 October 2011 -- 9:00a - 10:15a

The Quality Imperative: Surviving and Thriving Under Health Reform

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Disclosures

Neither I, Brent C. James, nor any family members, have any relevant financial relationships to be discussed, directly or indirectly, referred to or illustrated with or without recognition within the presentation.

I have no financial relationships beyond my employment at Intermountain Healthcare.

Outline

- 1. *A rapidly developing financial crisis***
- 2. *Opportunity: health care delivery falls short of its theoretic potential***
- 3. *We know why: the collision of 2 factors***
- 4. *We have found proven solutions* (with examples)**
- 5. *The healing professions are changing***
(from "every physician a stand-alone expert" to team-based care)
- 6. *A "new outlook for humanity:" sustainable, deployable, change***

1. The roots of reform

- ◆ *46 million people without health insurance*
- ◆ *cost increases that are bankrupting the country*

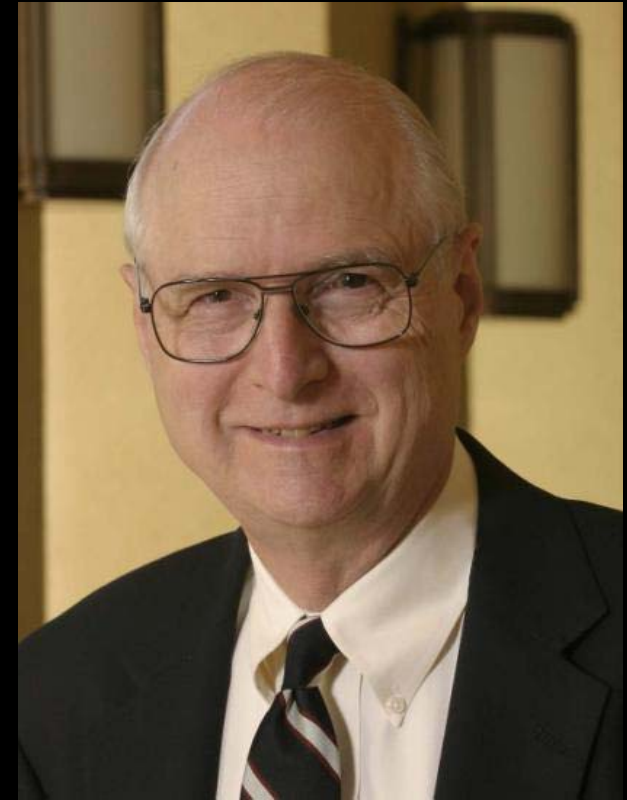
The uninsured - who are they?

- ◆ **Noncitizens** (*explicitly excluded*) **9.5 million** (~20.7%)
- ◆ **Eligible but not enrolled** **12 million** (~26.1%)
- ◆ **Temporarily uninsured** (*job change*) **9 million** (~19.6%)
- ◆ **Free riders** (*income > \$84,000*) **7 million** (~15.2%)

- ◆ **Long-term uninsured** (*real benefit*) **8 million** (~17.4%)

Reform, Part Deux

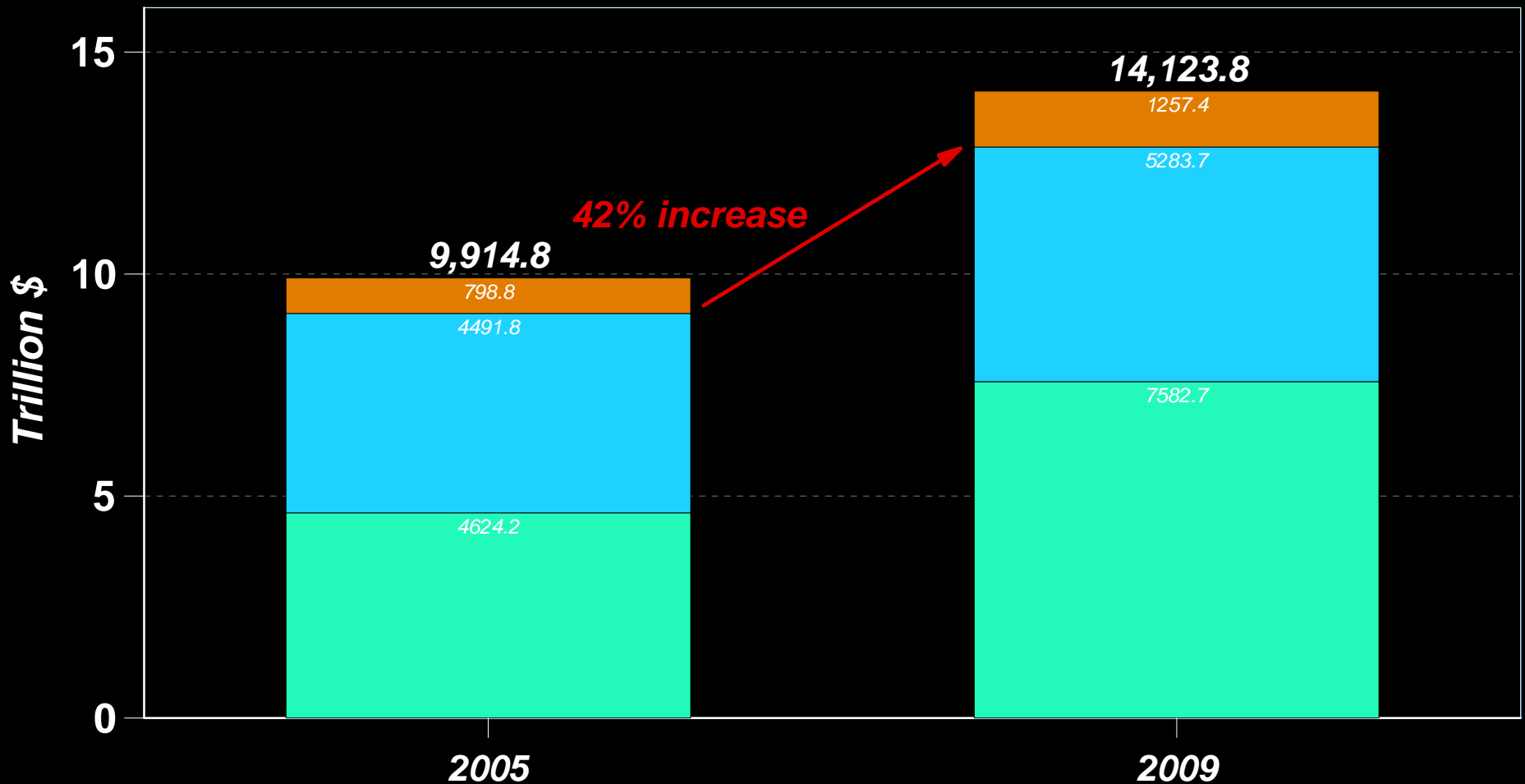
“The United States does not have decades to wait for health system reform; in 2009 about \$1.15 trillion of the federal budget was spent on health care. And health care expenditures are growing 2.7% per year faster than non-health care gross domestic product. [The current] reform bill does practically nothing to slow health expenditures.”



*Alain Enthoven, PhD
Stanford University*

U.S. national debt

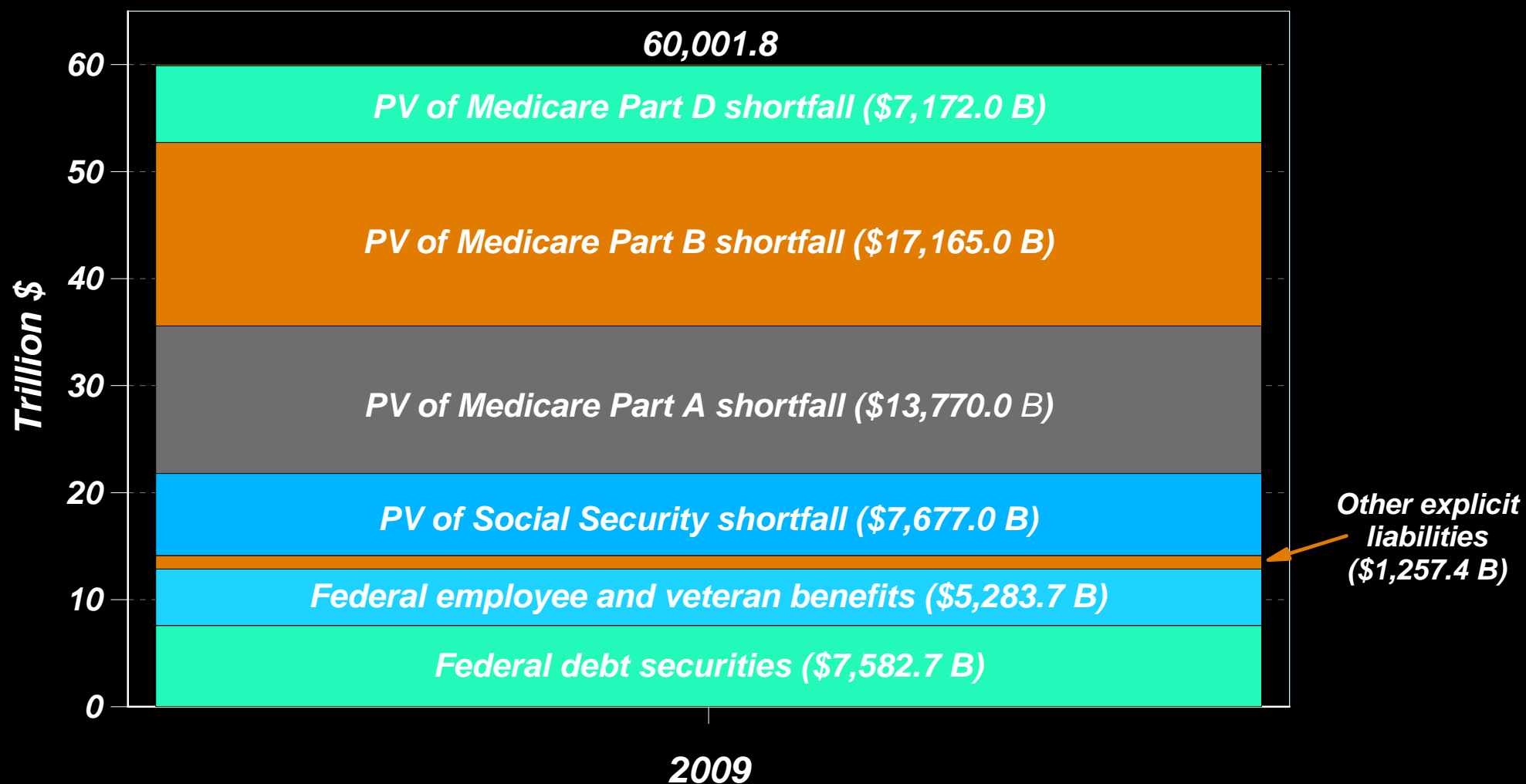
- *Other explicit liabilities*
- *Federal employee and veteran benefits*
- *Federal debt securities (Treasu bonds - official "national debt"*



Over \$45,000 for every man, woman and child in the U.S.

Total U.S. fiscal exposures

By layering on future obligations, the total net prevent value (PV) of debt rises to over \$60 trillion -- about \$195,000 for every man, woman and child in the U.S. More than two-thirds of the shortfall arises from health care delivery.)



Balancing the Medicare books

*“The long-range financial imbalance could be addressed in several different ways... these changes would require an immediate **134 percent increase in the tax rate or an immediate 53 percent reduction in expenditures.**”*

Medicare Board of Trustees; *The 2009 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds*, May 12, 2009

Balancing the Medicare books

“The long-range financial issues addressed in several changes to Medicare payments and reduced payments – with its combination of additional taxes to accomplish about 1/4th of this change, assuming that the payment reductions embedded in the bill go into effect. The Medicare Board will report in more detail later this year.”

Medicare Board of Trustees; The 2009 Annual Report of the Boards of Trustees of the Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds, May 12, 2009

The next step:

Health care reform,

as opposed to the

health insurance reform

that just passed (PPACA).

2. The opportunity *(care falls short of its theoretic potential)*

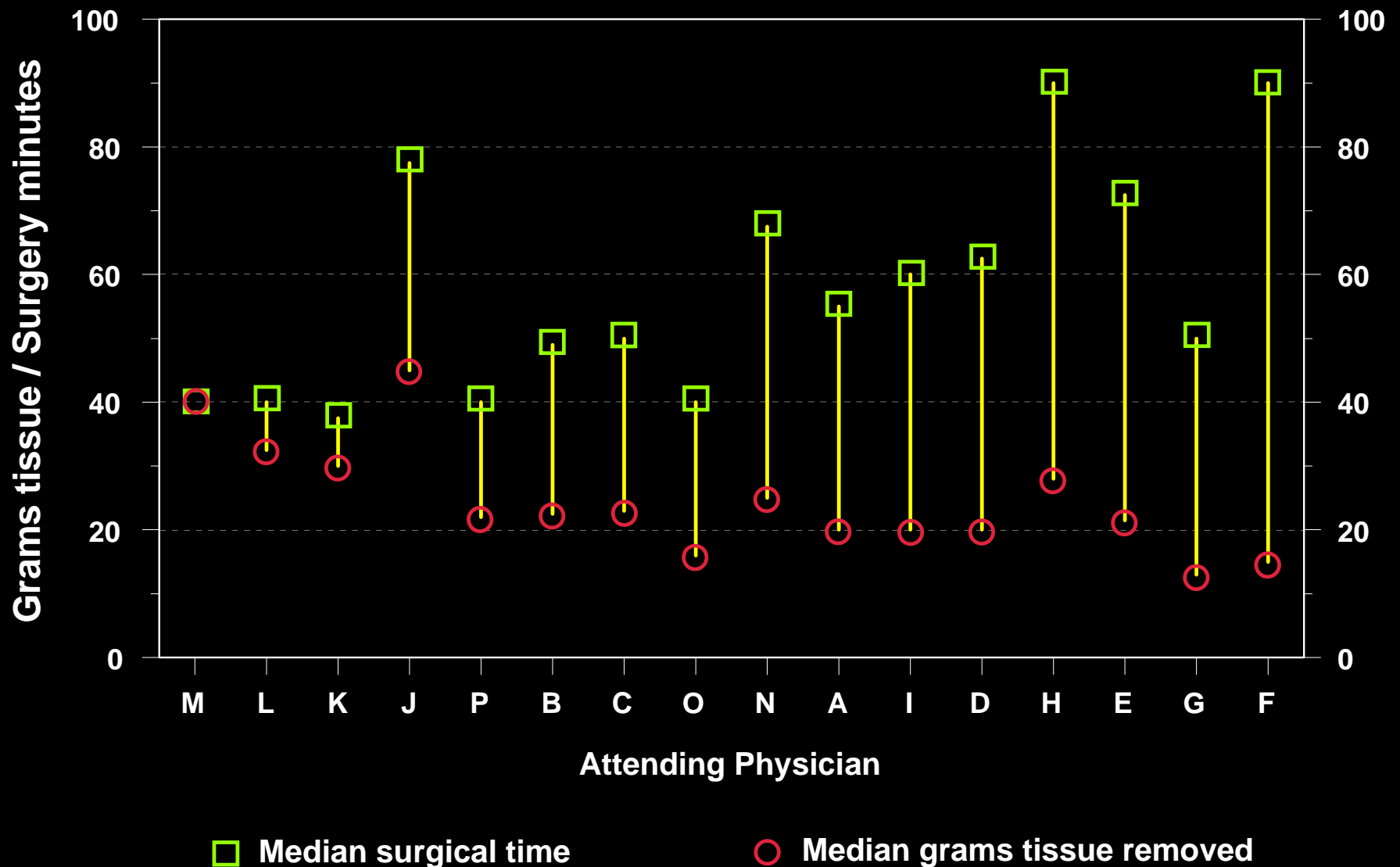
- 1. Well-documented, massive, variation in practices** *(beyond the level where it is even remotely possible that all patients are receiving good care)*
- 2. High rates of inappropriate care** *(2 - 32% of all care delivered, depending on specific condition examined)*
- 3. Unacceptable rates of preventable care-associated patient injury and death**
- 4. A striking inability to "do what we know works"**
- 5. Huge amounts of waste** *(>50%, by best recent measures), spiraling prices, and limited access* *(46.6 million uninsured Americans, increasing rates of under-insured, employers exiting the insurance market, medical tourism)*

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)

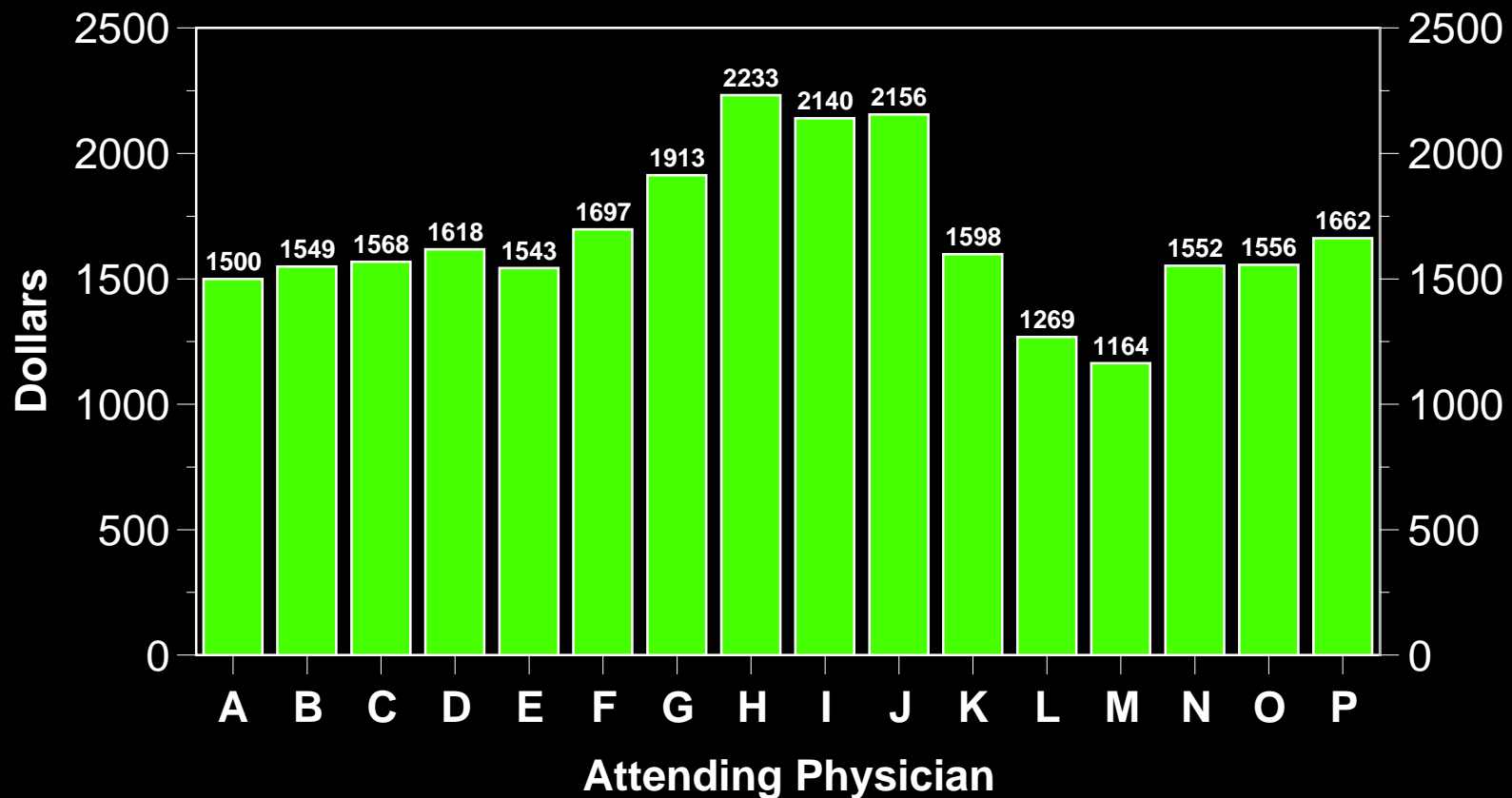
IHC TURP QUE Study

Median Surgery Minutes vs Median Grams Tissue



IHC TURP QUE Study

Average Hospital Cost



50+% of all resource expenditures in hospitals is quality-associated waste:

- ◆ *recovering from preventable foul-ups*
- ◆ *building unusable products*
- ◆ *providing unnecessary treatments*
- ◆ *simple inefficiency*

3. Why? The collision of 2 forces:

(1) **Continued reliance on the "craft of medicine"**
(clinicians as stand-alone experts)

runs up against

(2) **Clinical uncertainty**

in the context of

(3) **Payment that encourages utilization**

The craft of medicine *(each physician an expert)*

An individual physician

- ◆ ***placing her patient's health care needs before any other end or goal,***
- ◆ ***drawing on extensive clinical knowledge gained through formal education and experience***

Can craft

- ◆ ***a unique diagnostic and treatment regimen customized for that particular patient.***

Medicine's promise:

This approach will produce the best result possible for each patient.

Clinical uncertainty *(a hundred years of science)*

- 1. Lack of valid clinical knowledge regarding best treatment** *(poor evidence)*
- 2. Exponentially increasing new medical knowledge** *(doubling time has decreased to ~8 years; at current rates, a clinician will need to learn, unlearn, then relearn half of their medical knowledge base 5 times during a typical career)*
- 3. Continued reliance on subjective judgment** *(subjective recall is dominated by anecdotes, and notoriously poor when estimating results across groups or over time)*
- 4. Limitations of the expert mind when making complex decisions**
Miller, 1956: The magic number 7, plus or minus 2: some limits on our capacity for processing information
Eddy: "The complexity of modern medicine exceeds the capacity of the unaided human mind"

Which, combined with the craft of medicine, leads to:

- ◆ **Enthusiasm for unproven methods** ... *Mark Chassin, MD*
- ◆ **The maxim, "If it might work, try it"** ... *David Eddy, MD, PhD*
- ◆ **Quality means "spare no expense"** ... *Brent James, MD, MStat*

4. We have found proven solutions

Shared Baseline protocols *(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")*

Dr. Alan Morris, LDS Hospital, 1991

- ◆ **NIH-funded randomized controlled trial**
assessing an "artificial lung" vs. standard ventilator management for acute respiratory distress syndrome (ARDS)
- ◆ **discovered large variations in ventilator settings**
across and within expert pulmonologists
- ◆ **created first **Shared Baseline** protocol to standardize care, while**
encouraging clinicians to vary based on individual patient needs; and feeding back variation data in a "learning system"
- ◆ **Results:**
survival (for ECMO entry criteria patients) improved from 9.5% to 44%
costs fell by ~25% (from \$160k to \$120k)
physician time fell by ~50%

Practical limitations on protocol use

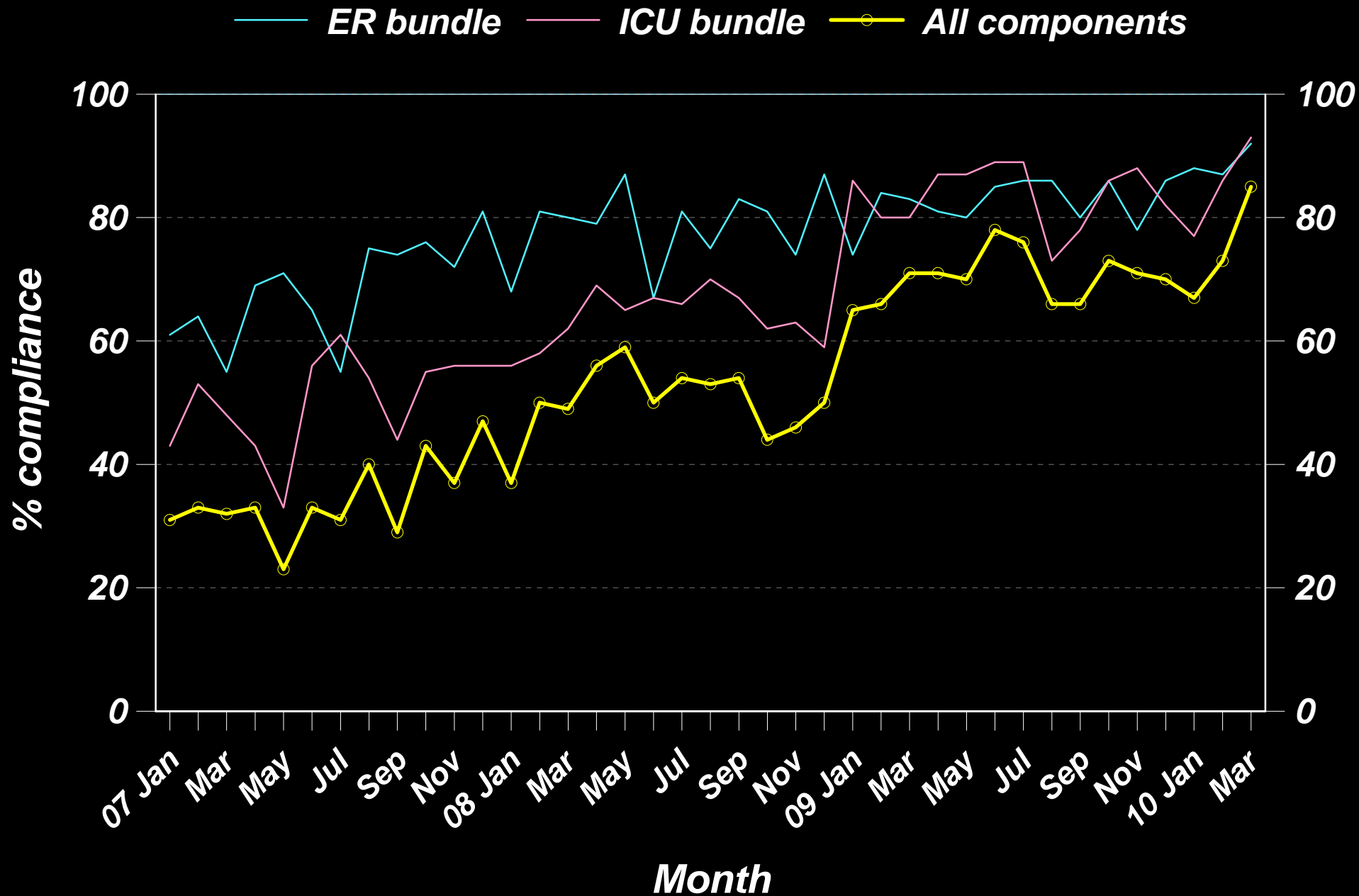
*When abstract guidelines hit real patient care,
experience clearly shows that (with very rare exception)*

No protocol fits every patient;

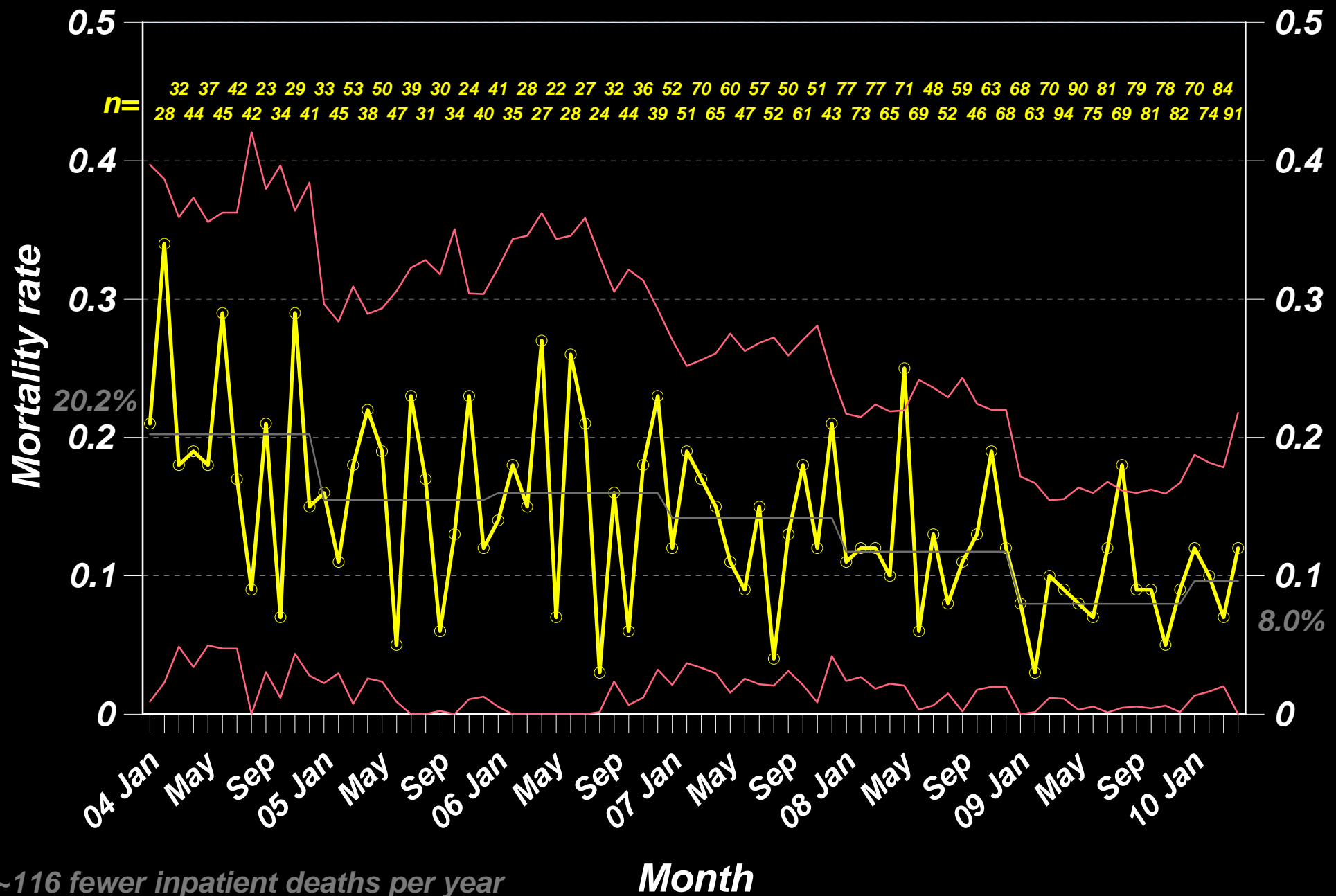
more important,

No protocol (perfectly) fits any patient.

Sepsis bundle compliance

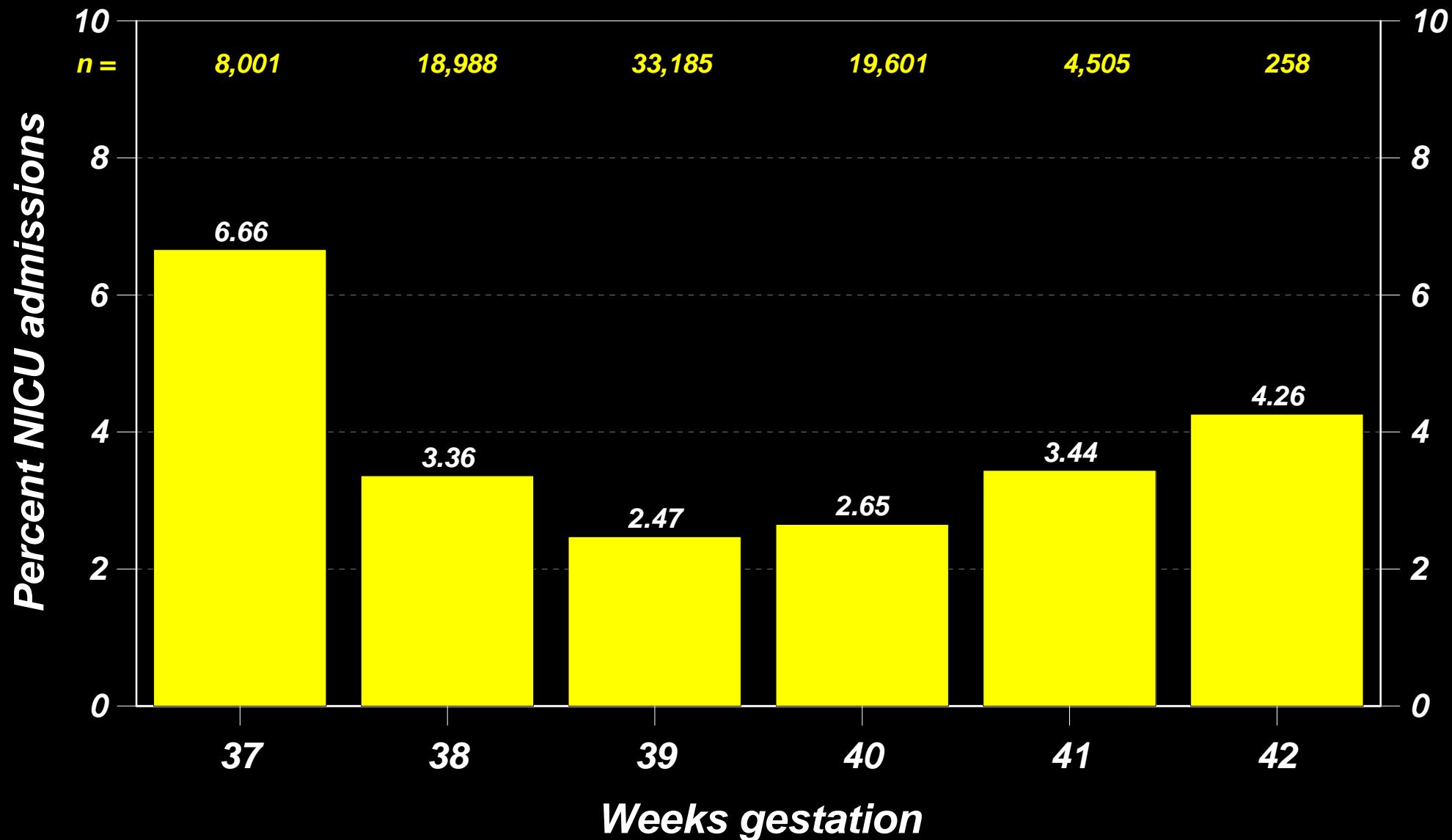


Sepsis mortality - ER-ICU transfers

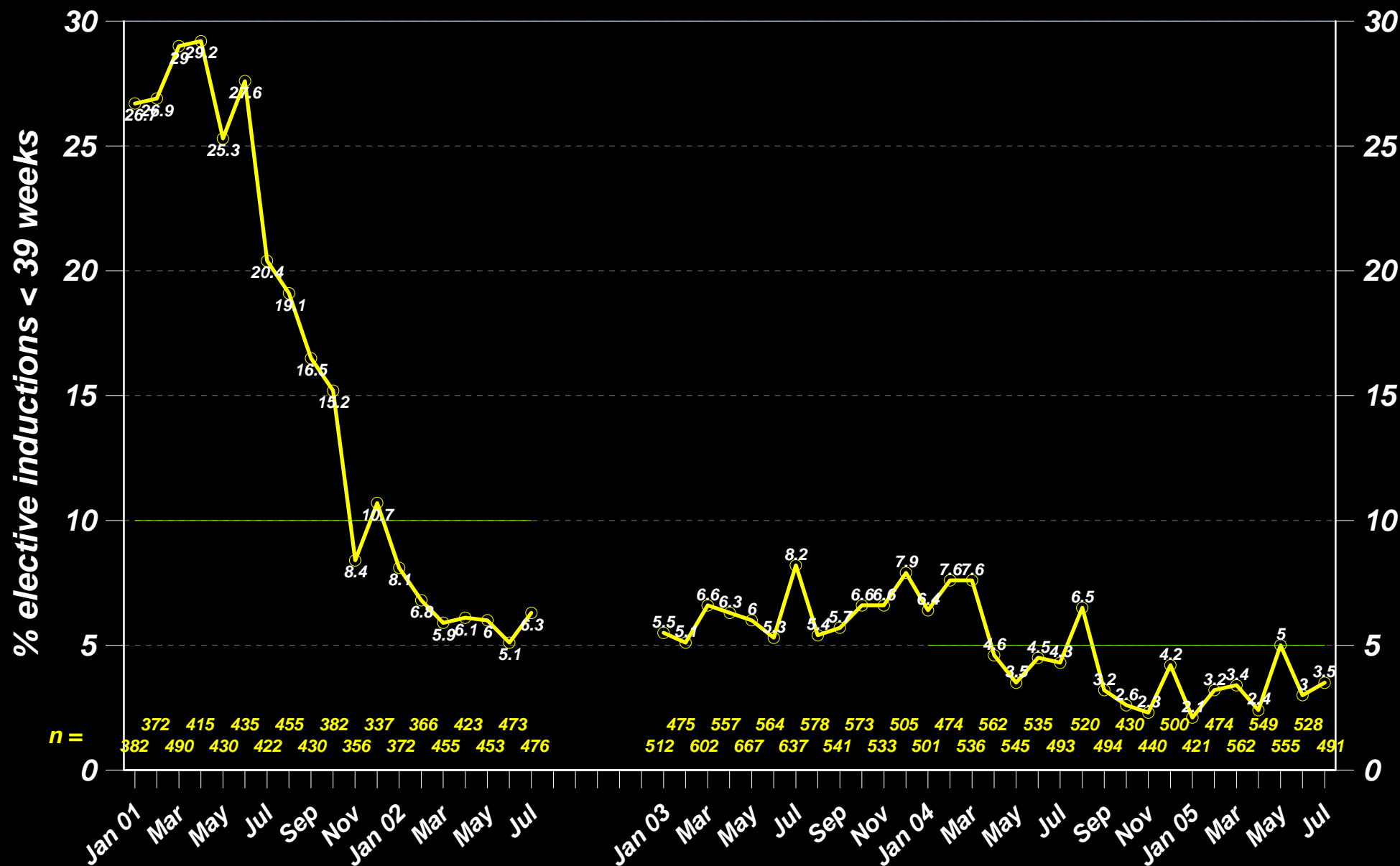


NICU admits by weeks gestation

Deliveries w/o Complications, 2002 - 2003

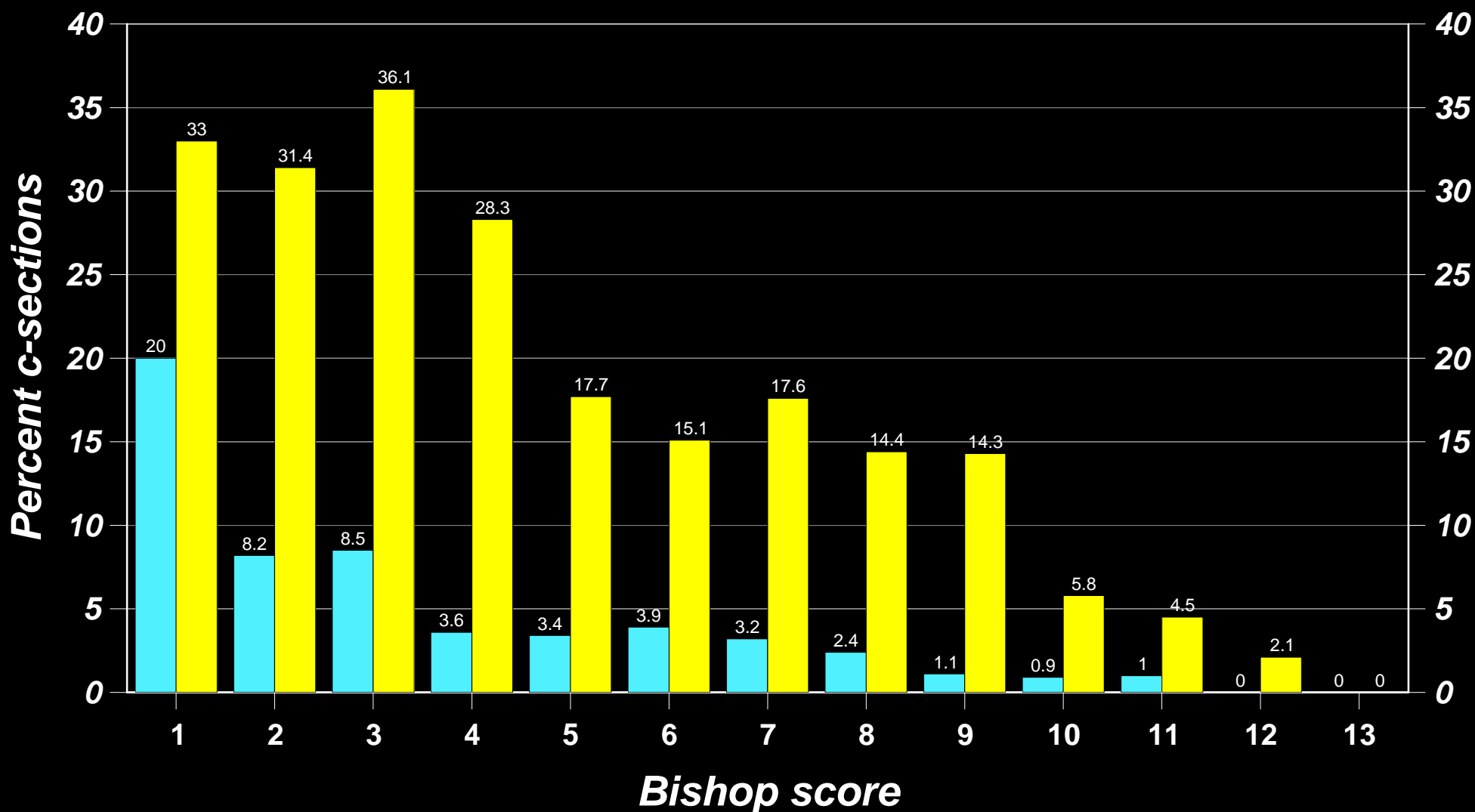


Elective inductions < 39 weeks



Unplanned c-section rates

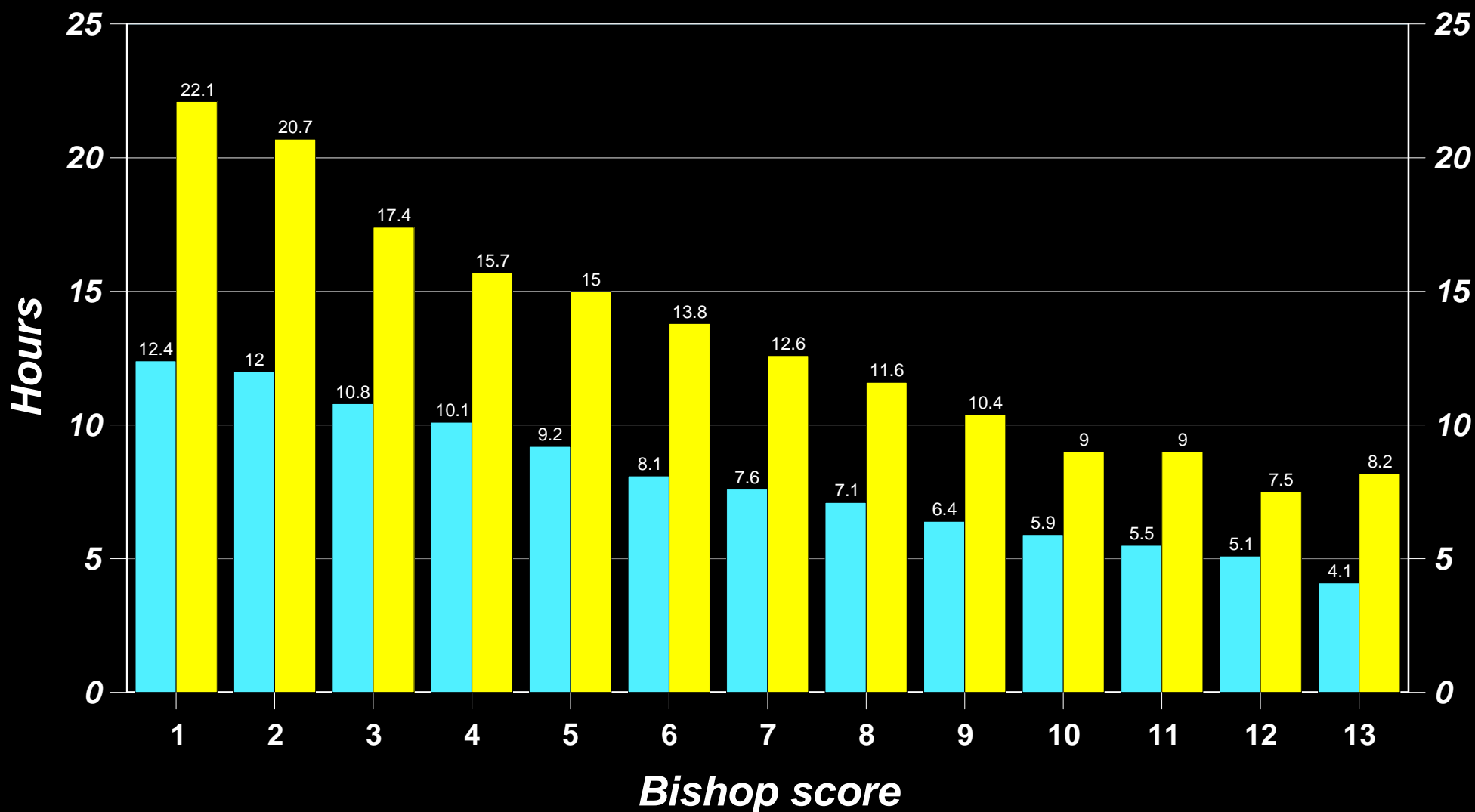
Electively induced patients by Bishop score, Jan 2002 - Aug 2003



<u>n</u>													
<i>Multips</i>	10	49	130	274	567	856	1114	1266	1062	737	415	86	19
<i>Primips</i>	18	35	61	99	164	278	375	487	453	346	179	47	7

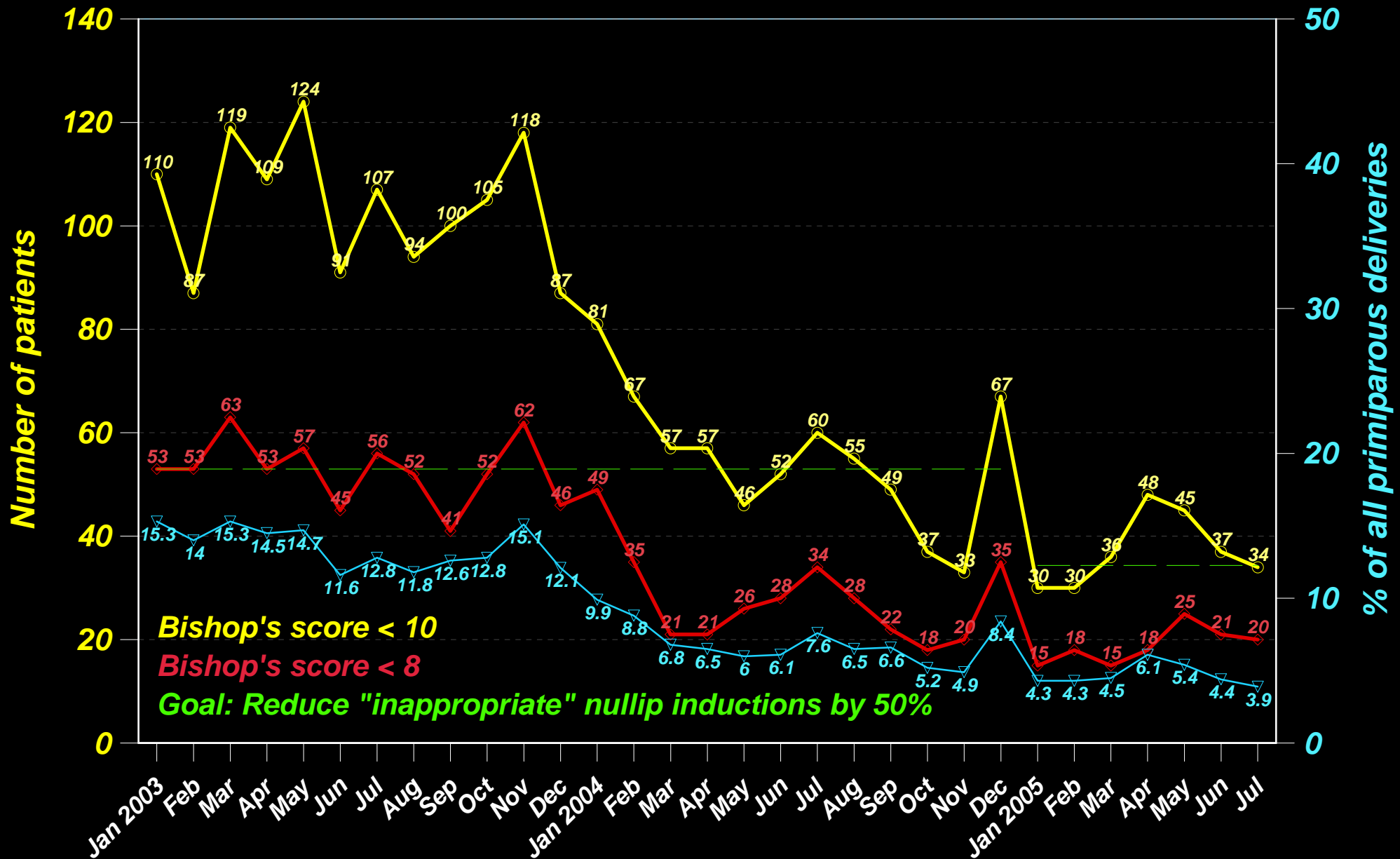
Average hours in labor & delivery

Electively induced patients by Bishop score, Jan 2002 - Aug 2003

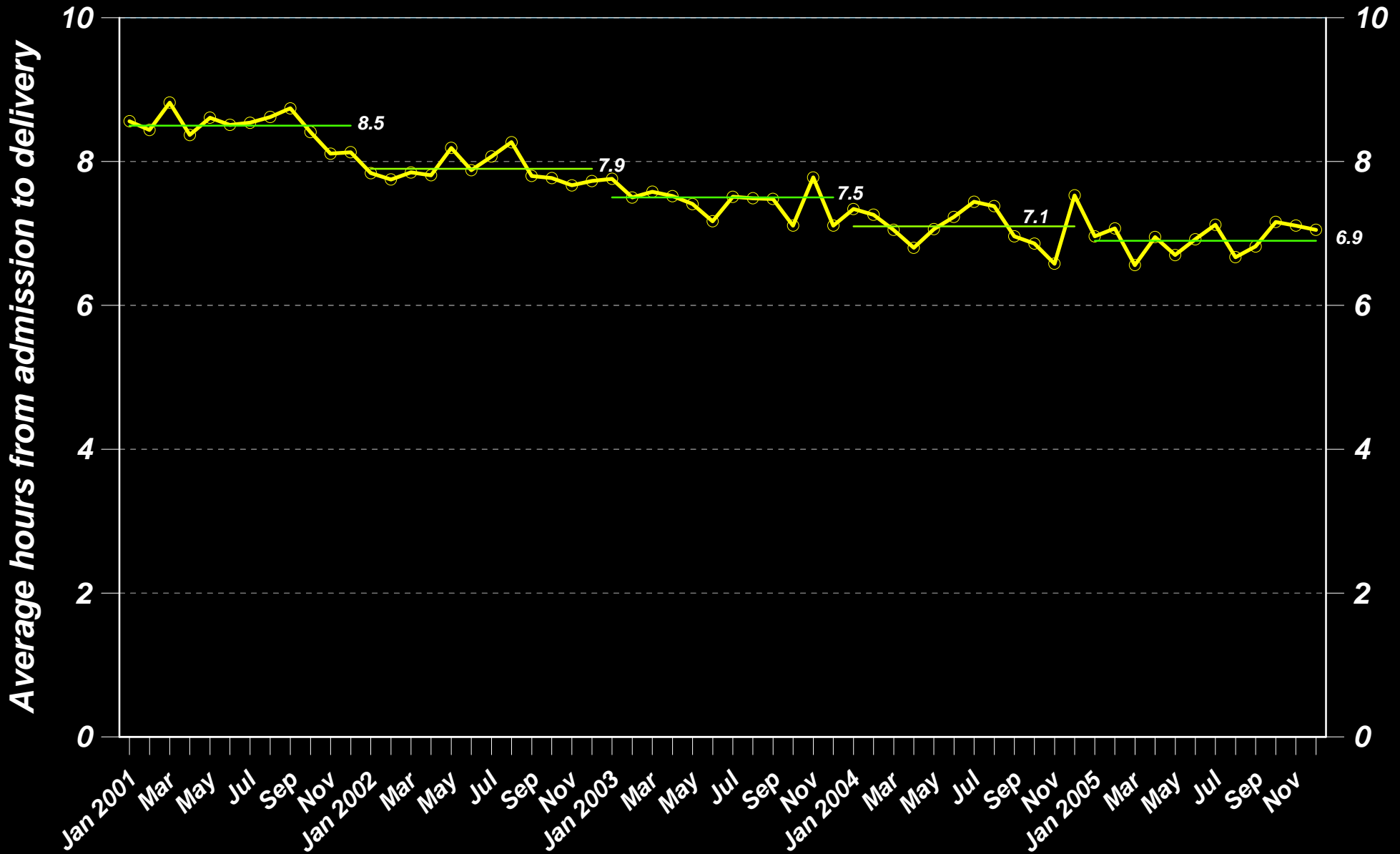


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Primiparous elective inductions

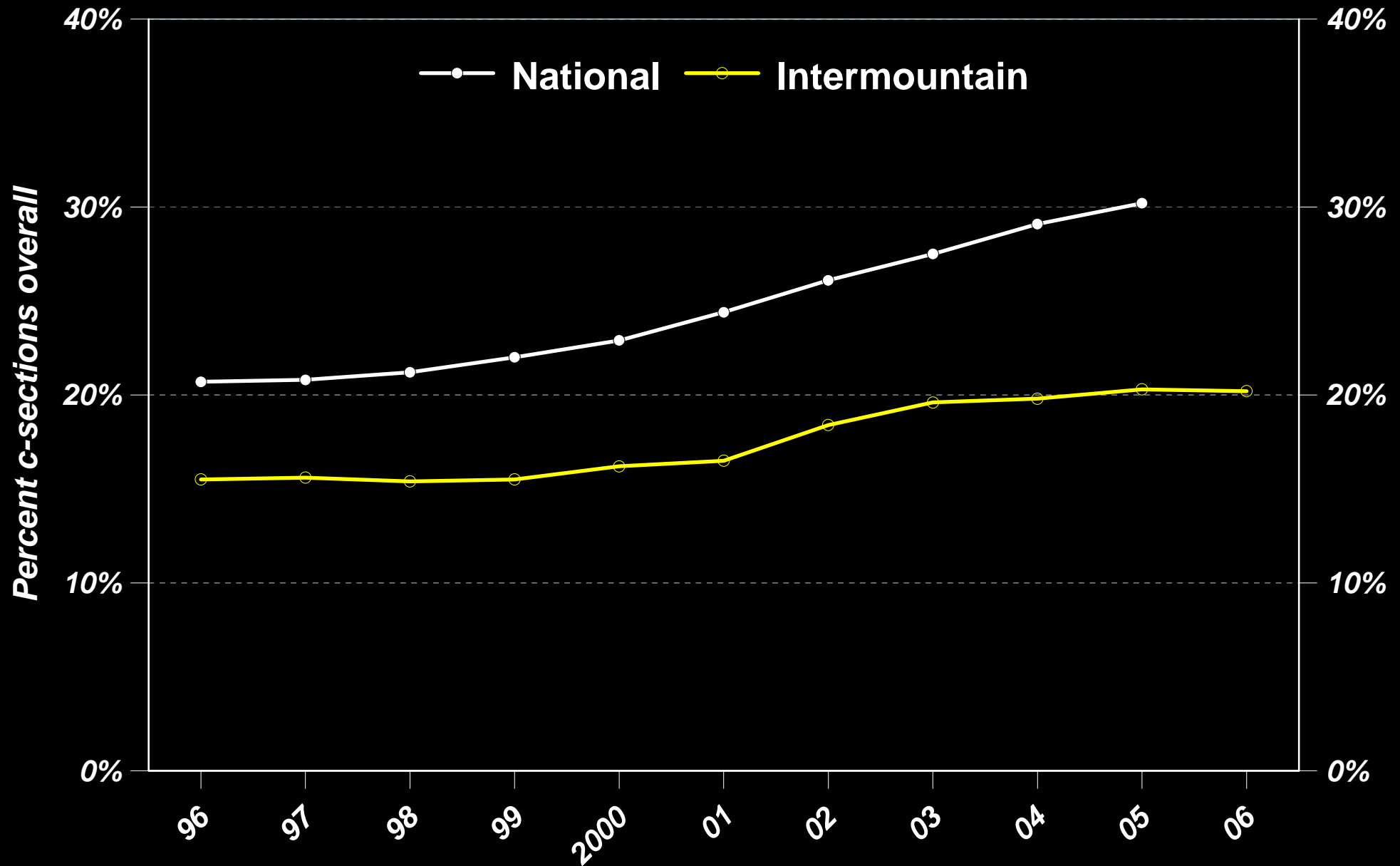


Elective induction: length of labor



(note: includes all elective inductions)

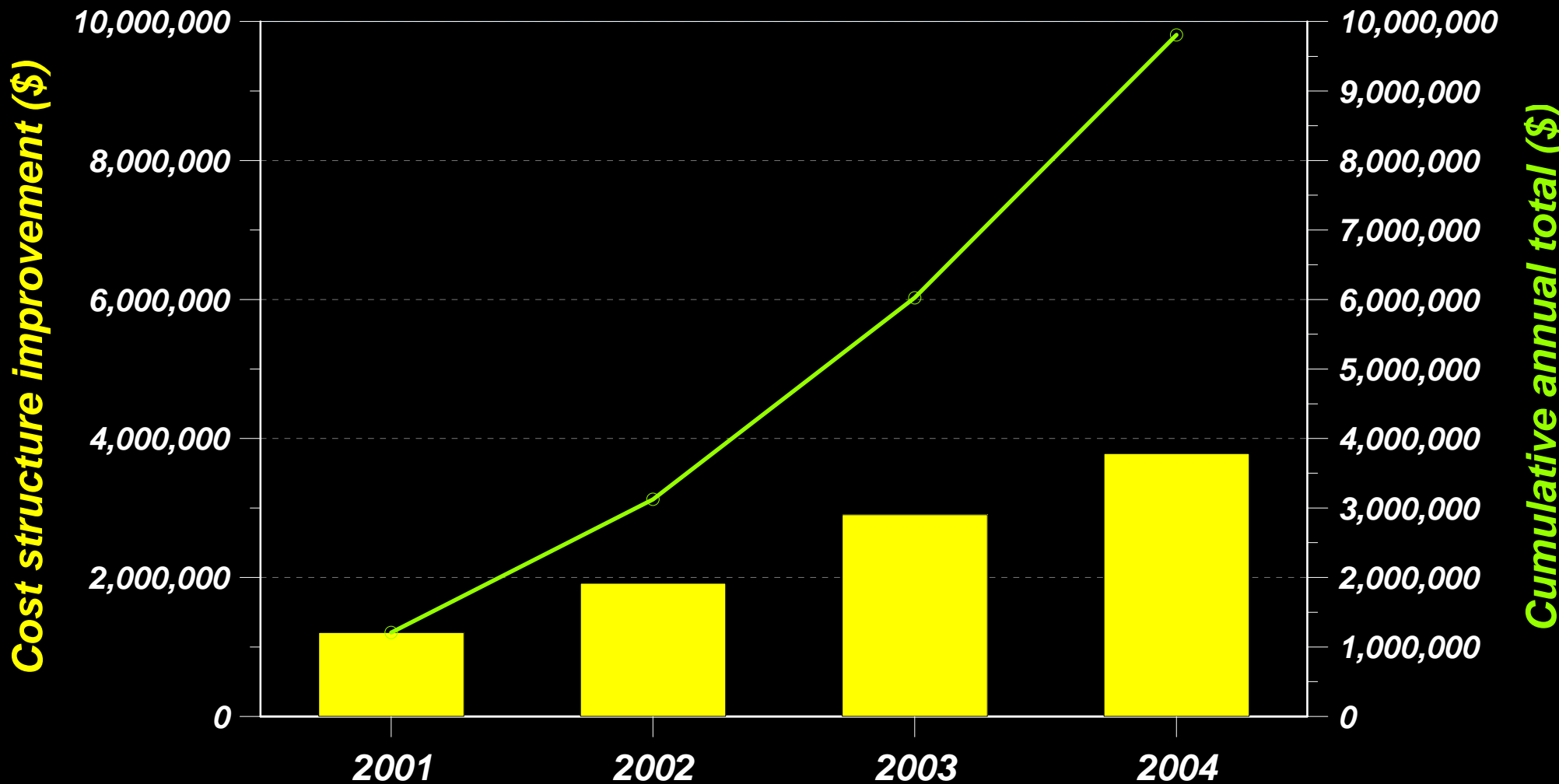
Overall c-section rate



Quality-based cost improvement

Combined maternal and neonatal variable cost

Deliveries without complications resulting in normal newborns
Actual - expected cost, based on year-end 2000 with PPI inflation



Deming: Quality controls costs

	<u>Quality</u>	<u>Cost</u>	<u>Forum</u>	<u>Potential Savings</u>
Waste:				
<i>Quality waste</i>	↑	↓	<i>internal</i>	<i>25-40%</i>
<i>Inefficiency waste</i>	-	↓	<i>internal</i>	<i>> 50%</i>
Cost-benefit	↑	↑	<i>society</i>	<i>(none)</i>

Shared savings? (2008 data)

	<u>Per Case</u>	
	<u>Cost</u>	<u>NOI</u>
Normal delivery:	<1.00>	303
Unplanned c-section:	<2.05>	648

Aim: reduce unplanned c-sections by 2 percentage points
(6.25% to 4.25%; more than 670 fewer c-sections per year)

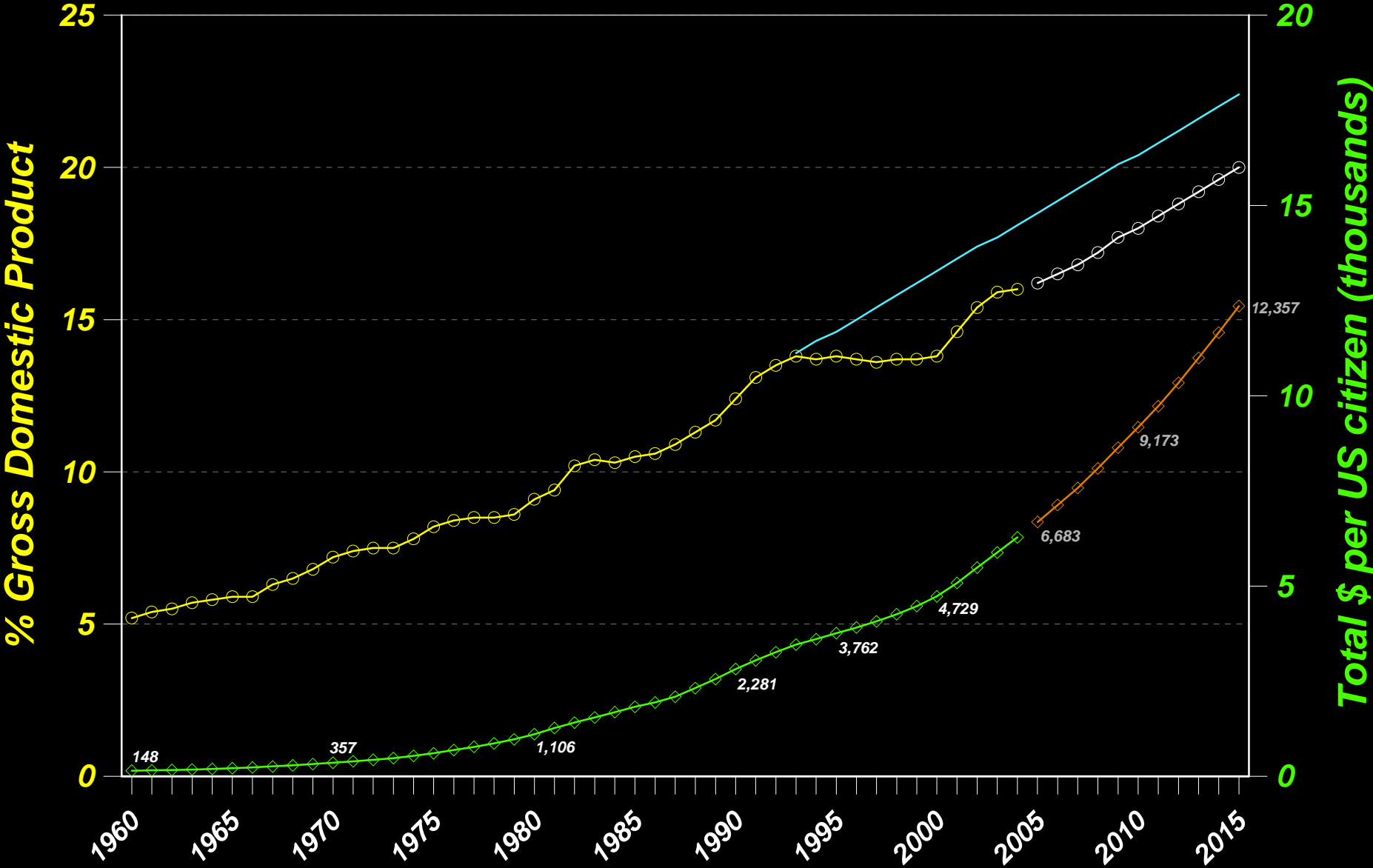
Reduced cost:	1,991,860
Reduced revenue <small>(insurance payments):</small>	2,216,800
Reduced NOI:	224,940
Reduced contribution to margin:	1,370,222

(2008 data)

Current payment mechanisms

- ◆ **Actively incent overutilization:** *do more, get paid more - even when there is no health benefit*
- ◆ **I am paid to harm my patients** *(paid more for complications)*
- ◆ **Actively disincent innovation that reduces costs through better quality** *(a key success factor for the rest of the U.S. economy)*
- ◆ **Very strong, deep, wide evidence showing exactly this effect throughout U.S. healthcare**

Bending the cost curve



Capitation makes a comeback

- 1. ACOs, AMHs: sophisticated forms of capitation**
 - *provider at (financial) risk: bundled payment, chronic disease capitation, etc. ... but with*
 - *better data systems (quality measurement) and better risk adjustment*
- 2. Represent "managed care at the bedside"**
 - *managed care the only method that has "bent the cost curve"*
 - *shifts control / accountability from insurers to care delivery groups*
- 3. More than 80% of cost saving opportunities live on the clinical side**

5. The healing 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*

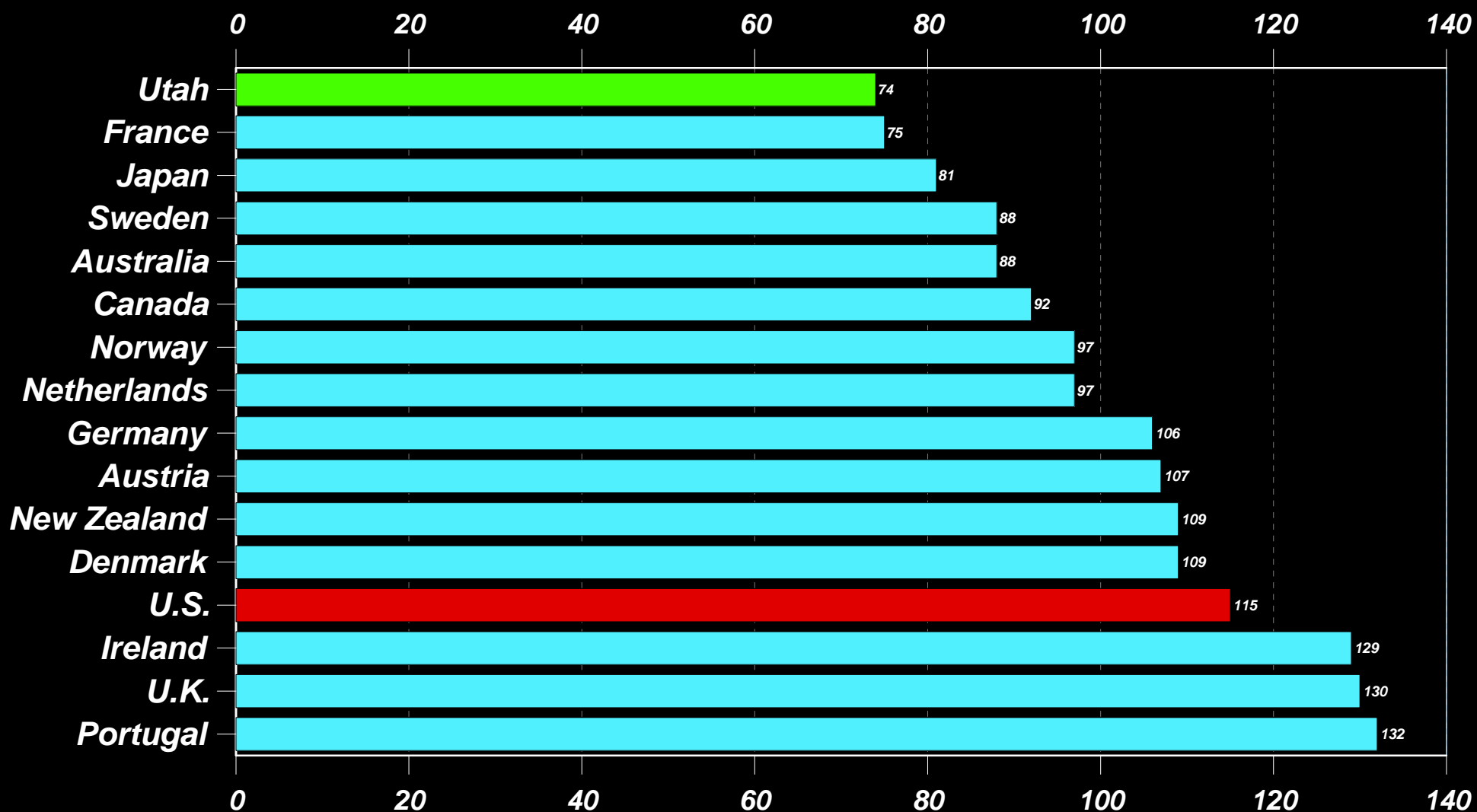
- ◆ *groups of peers, treating similar patients in a shared setting*
- ◆ *plan coordinated care delivery processes* (e.g., standing order sets)
- ◆ *which individual clinicians adapt to specific patient needs*
- ◆ *early experience shows*
 - ▶ *less expensive* (facility can staff, train, supply and organize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

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***

Mortality amenable to health care

Deaths per 100,000 population



Source: World Health Organization, Nolte and McKee, Rutgers Center for State Health Policy Standardized for age (1998)
Utah from 2003, normalized for general US change from 1998

The Wall Street Journal

Perverse Incentives in Health Care

April 5, 2007

John C. Goodman, President, National Center for Policy Analysis

Research at Dartmouth Medical School suggests that if everyone in America went to the Mayo Clinic, our annual health-care bill would be 25% lower (more than \$500 billion!), and the average quality of care would improve. If everyone got care at Intermountain Healthcare in Salt Lake City, our healthcare costs would be lowered by one-third.

Of course, not everyone can get treatment at Mayo or Intermountain. But why are these examples of efficient, high-quality care not being replicated all across the country? The answer is that high-quality, low-cost care is not financially rewarding. Indeed, the opposite is true. Hospitals and doctors can make more money providing inefficient, mediocre care.

Wells Fargo inflation summary, 1988-2006

December 2006

**WELLS
FARGO**

COST OF LIVING INDEX

	Wasatch Front			National			
	Index Mar. 1988=100	% Change 6 Mos.*	(Non-Seas. Adj.) 1 Mo. Prior	Index Mar. 1988=100	% Change 6 Mos.*	(Non-Seas. Adj.) 1 Mo. Prior	(Seas. Adj.) 1 Mo. Prior
All Categories	154.6	-0.1%	0.2%	173.4	2.7%	0.1%	0.5%
Housing	182.8	2.7	0.1	175.6	3.8	0.1	0.4
Transportation	120.2	-11.4	-1.4	163.9	0.8	0.9	1.8
Health Care	157.4	0.1	-0.1	249.5	3.9	0.0	0.1
Food at Home	201.2	3.3	3.1	170.6	1.8	0.0	-0.3
Clothing	113.2	-1.6	0.6	102.9	0.2	-2.5	0.6
Food Away	162.2	0.0	0.0	168.7	3.2	0.3	0.3
Utilities	128.7	-1.0	0.0	175.4	3.1	1.1	1.2
Recreation	139.1**	5.8	0.0	109.8 [†]	1.3	-0.4	-0.3
Education & Comm.	124.6**	5.6	0.0	116.2 [†]	2.5	-0.1	0.2
Other Goods & Svcs.	104.3**	0.0	0.0	243.3	2.6	0.7	0.8

*Last six-month percentage change compared with same period one year ago.
 ***(Feb. 1998=100 base)

National Data Source: U.S. Bureau of Labor Statistics
 †(Dec. 1997=100 base)

6. "Better has no limit" *(an old Yiddish proverb)*

- ◆ *The professions passed the tipping point roughly 9 years ago; accelerating rapidly*
- ◆ *Similar major change in care delivery operations*
- ◆ *Tightly linked to better internal data (true transparency)*
- ◆ *Often called "**Organized Care:**" Health care as an organized system focused around patient need (not built around physicians or technology; "patient-centered care")*
- ◆ *Financial incentives (payment) aligned to appropriate patient-centered professional goals = **provider "at risk" payment** (ACOs; AMH, bundled payment)*
- ◆ *Key operational idea: Don't wait for Washington*

"I am sorry for you, young men (and women) of this generation. You will do great things. You will have great victories, and standing on our shoulders, you will see far, but you can never have our sensations. To have lived through a revolution, to have seen a new birth of science, a new dispensation of health, reorganized medical schools, remodeled hospitals, a new outlook for humanity, is not given to every generation."

-- Sir William Osler

At the opening of the Phipps Clinic in England, near the end of his career. Cited in

Reid, Edith Gittings. The Great Physician: A Life of Sir William Osler. New York, NY: Oxford University Press, 1931 (p. 241).