



**Congressional Budget Office**

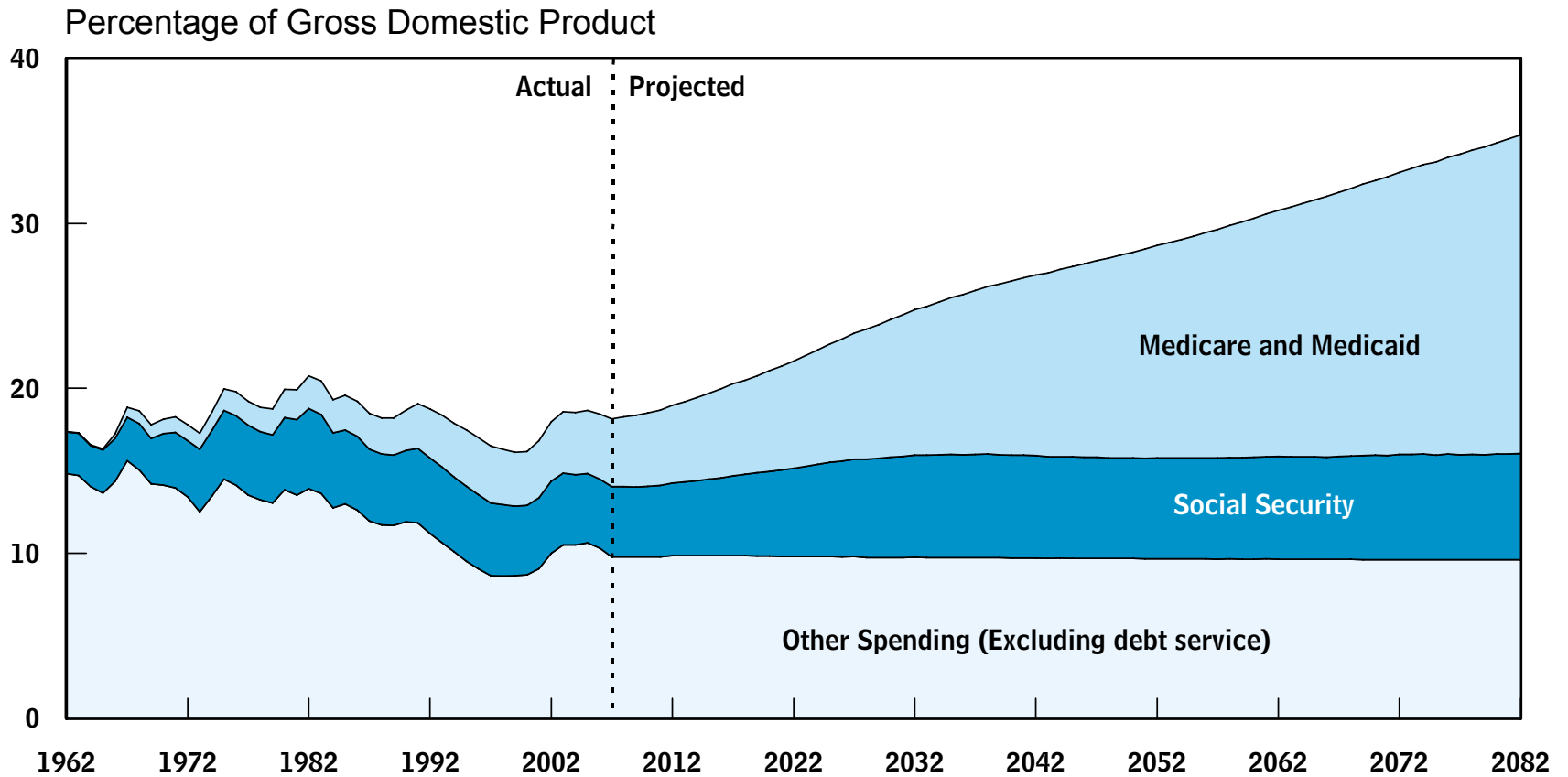
**Eighth Annual Marshall J. Seidman Lecture,  
Harvard Medical School**

**New Ideas About Human Behavior in  
Economics and Medicine**

**Peter Orszag  
Director  
October 16, 2008**



# Federal Spending Under CBO's Alternative Fiscal Scenario





## Learning from Our Mistakes

- As we seek to improve the efficiency of the health sector, let's learn some lessons from economics.

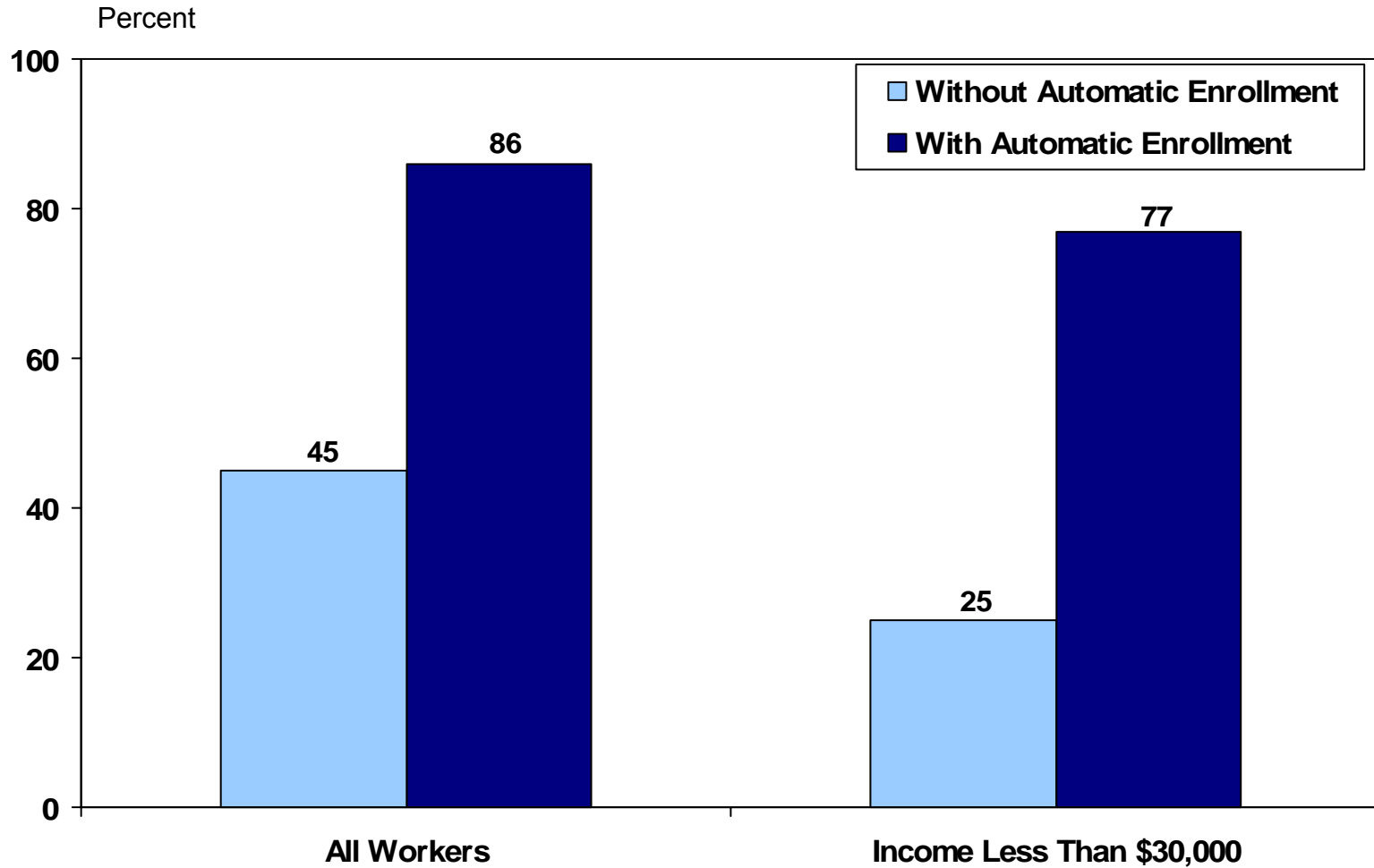


## Saving for Retirement, Econ 101

- Retirement saving depends on projected income, projected rate of return, tax preferences, and the company's matching contribution.



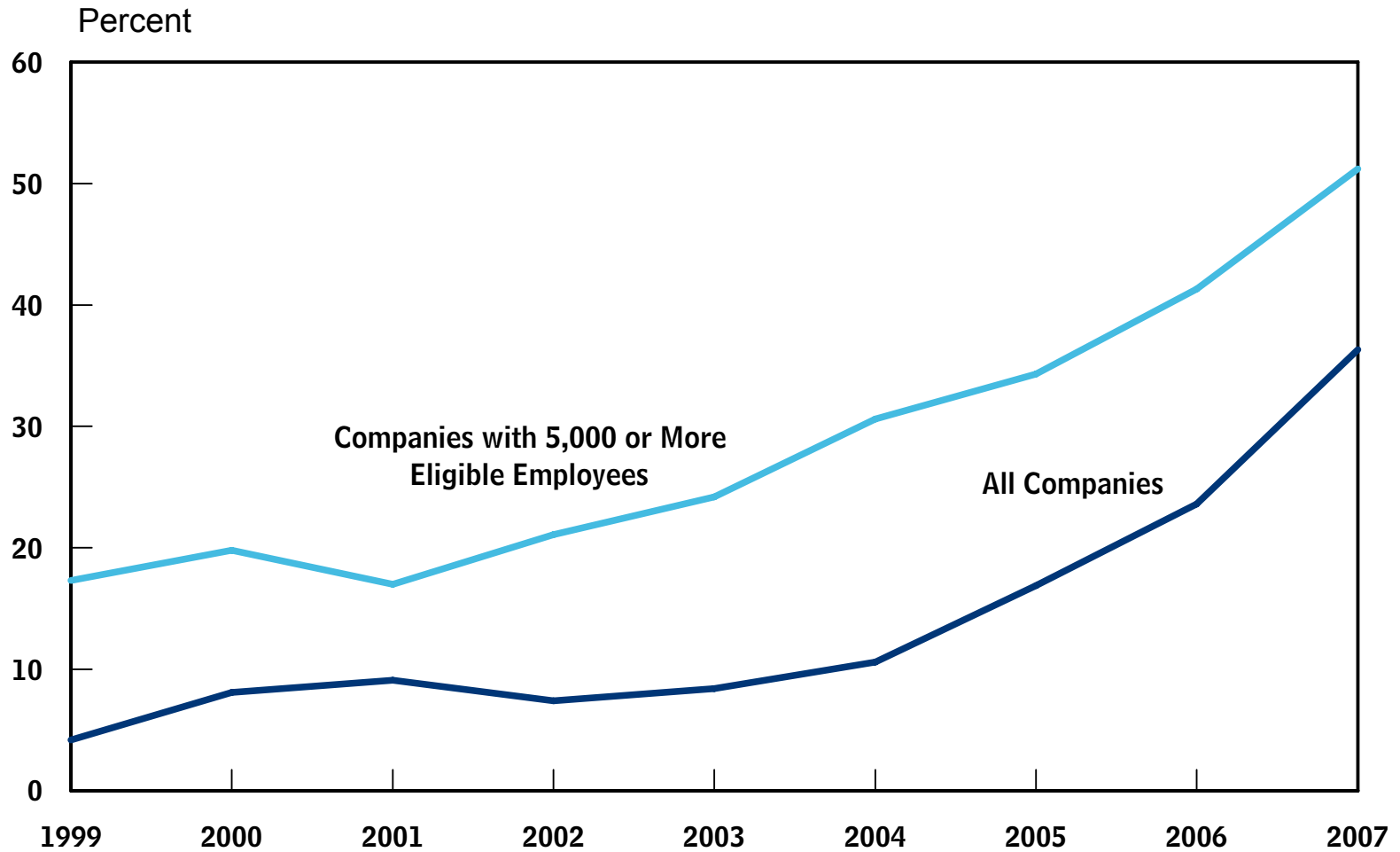
# The Effect of Automatic Enrollment on Initial Participation Rates in Companies with 401(k) Plans



Source: Nesmith, Utkus, and Young.



# Share of 401(k) Plans Featuring Automatic Enrollment



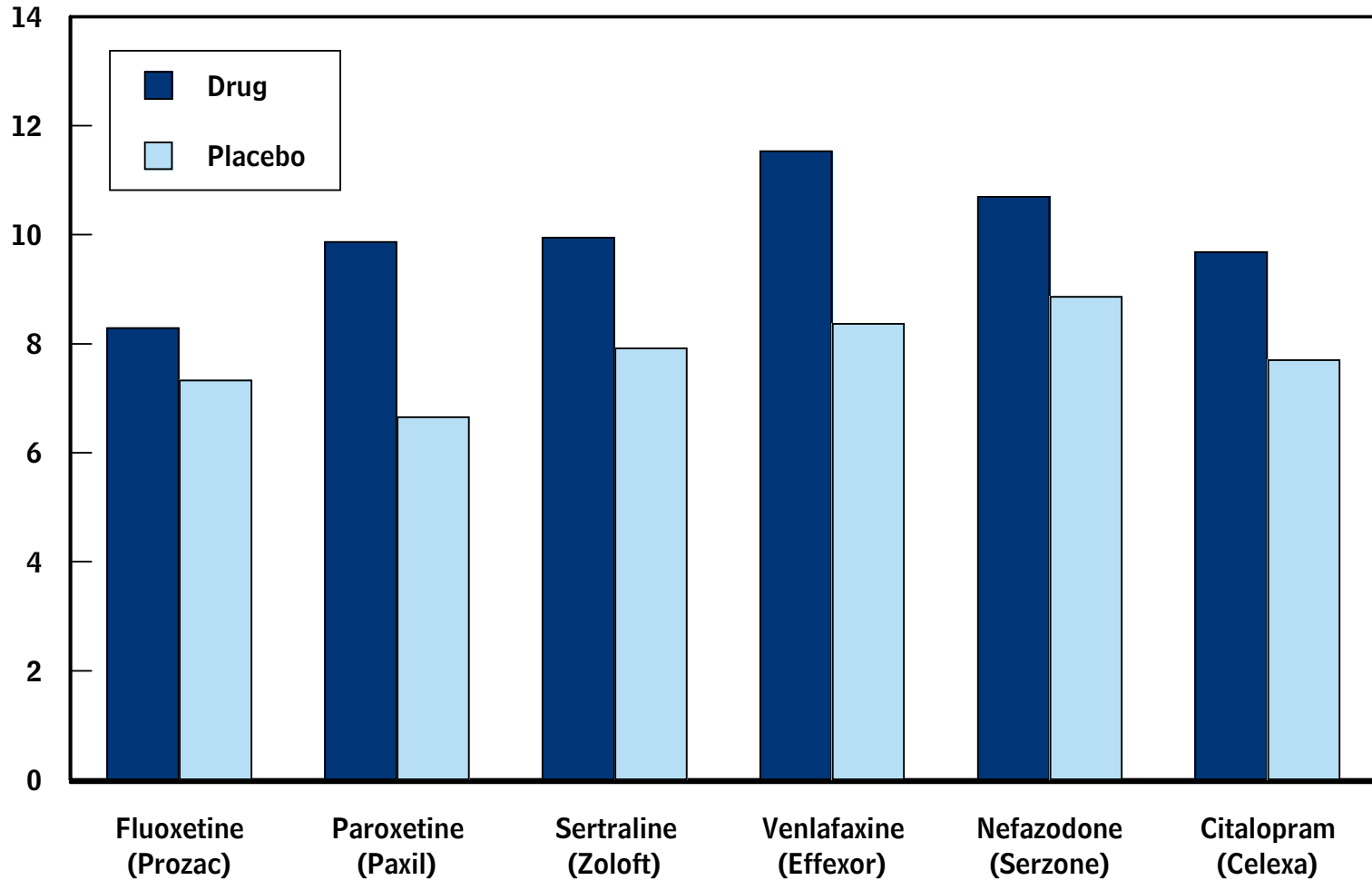
Source: Data from Profit Sharing/401k Council of America.



- Are we ignoring the same lessons in health care and medical science?



# The Placebo Effect: Mean Improvement on Hamilton Depression Scale, vs. Common Antidepressants

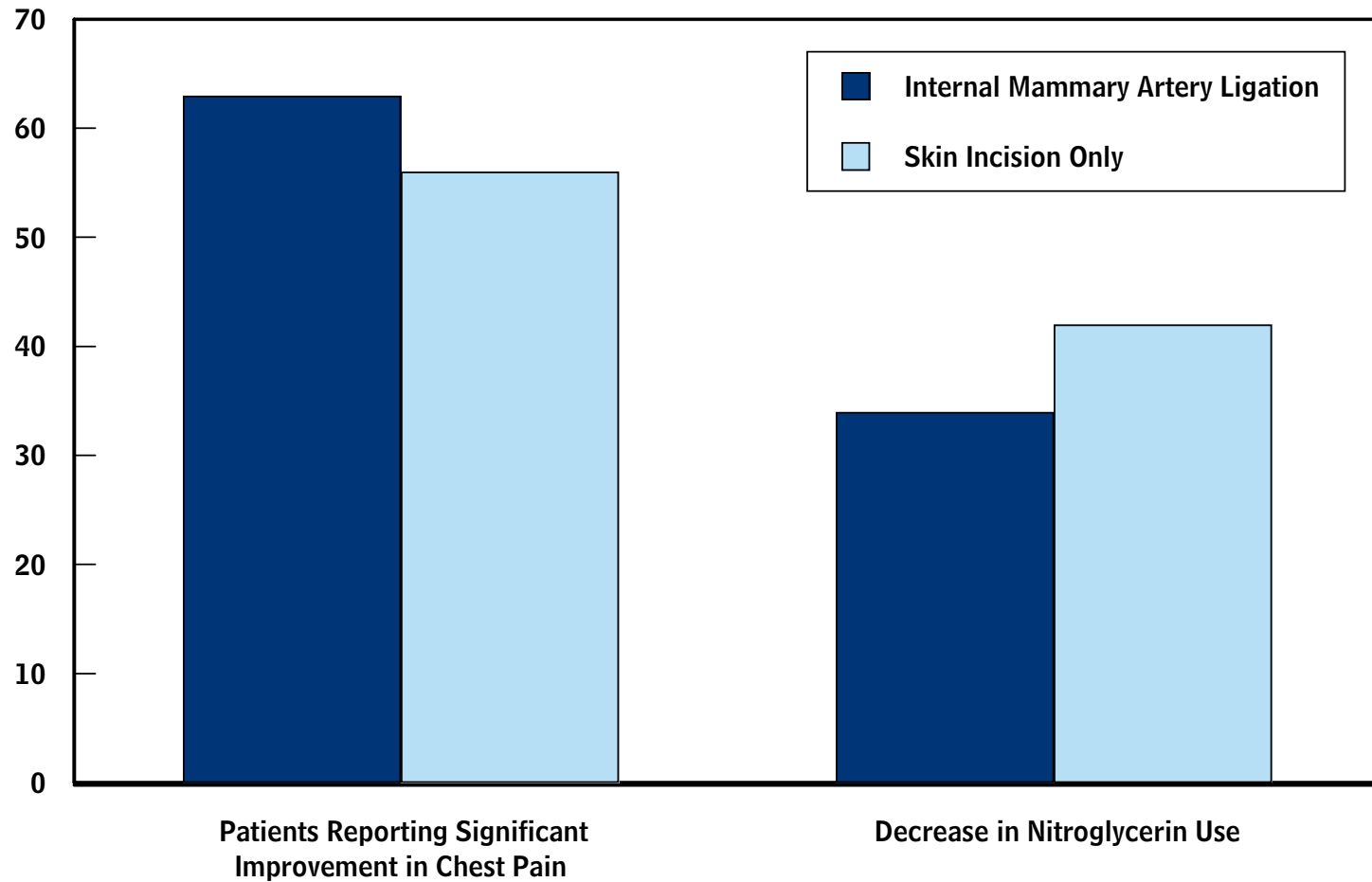


Source: Kirsch (2002).





# The Placebo Effect: Angina Pectoris Treatment, vs. Surgery

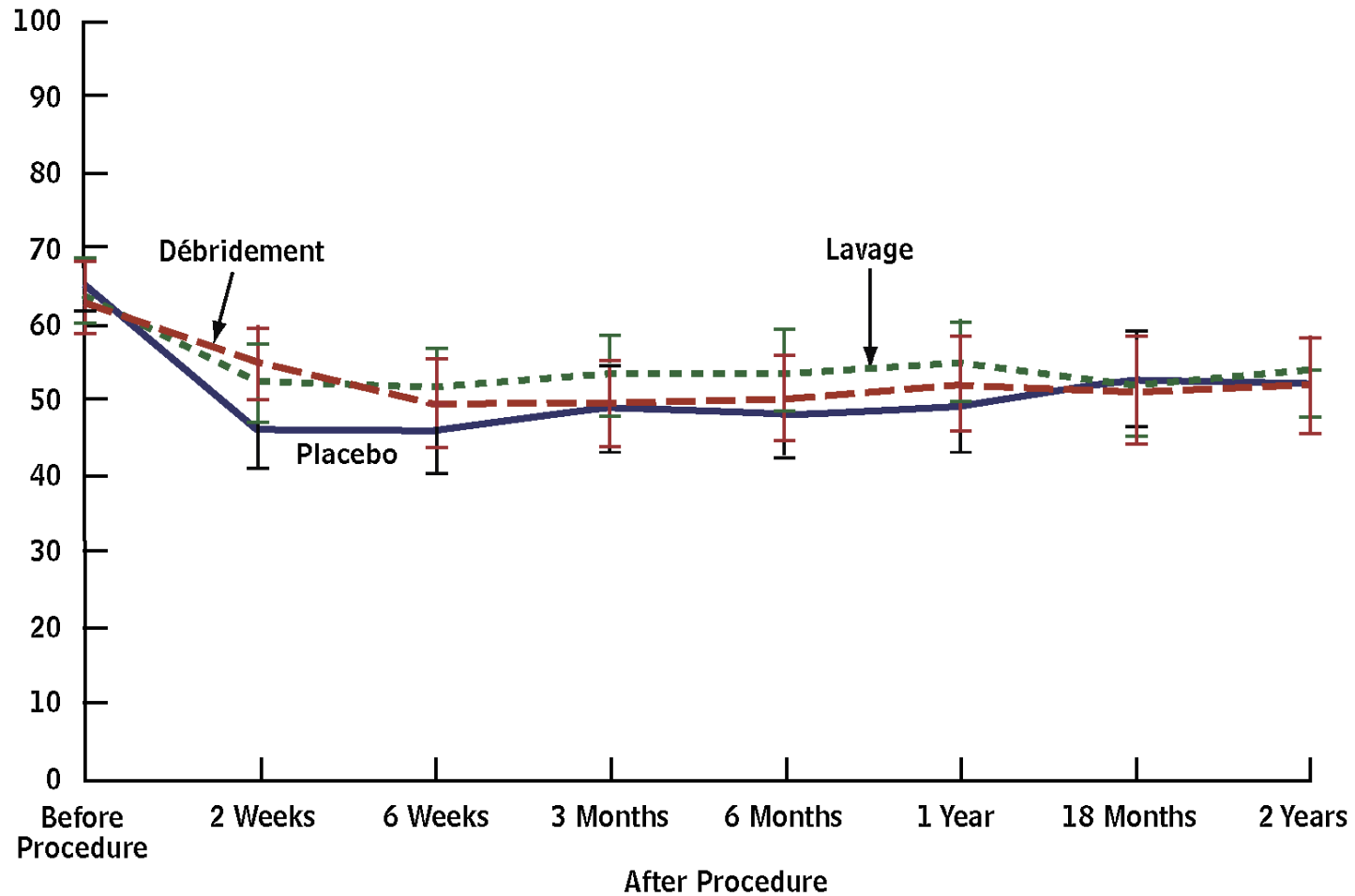


Source: Cobb and others (1959).



# The Placebo Effect: Reduction of Pain After Knee Surgery

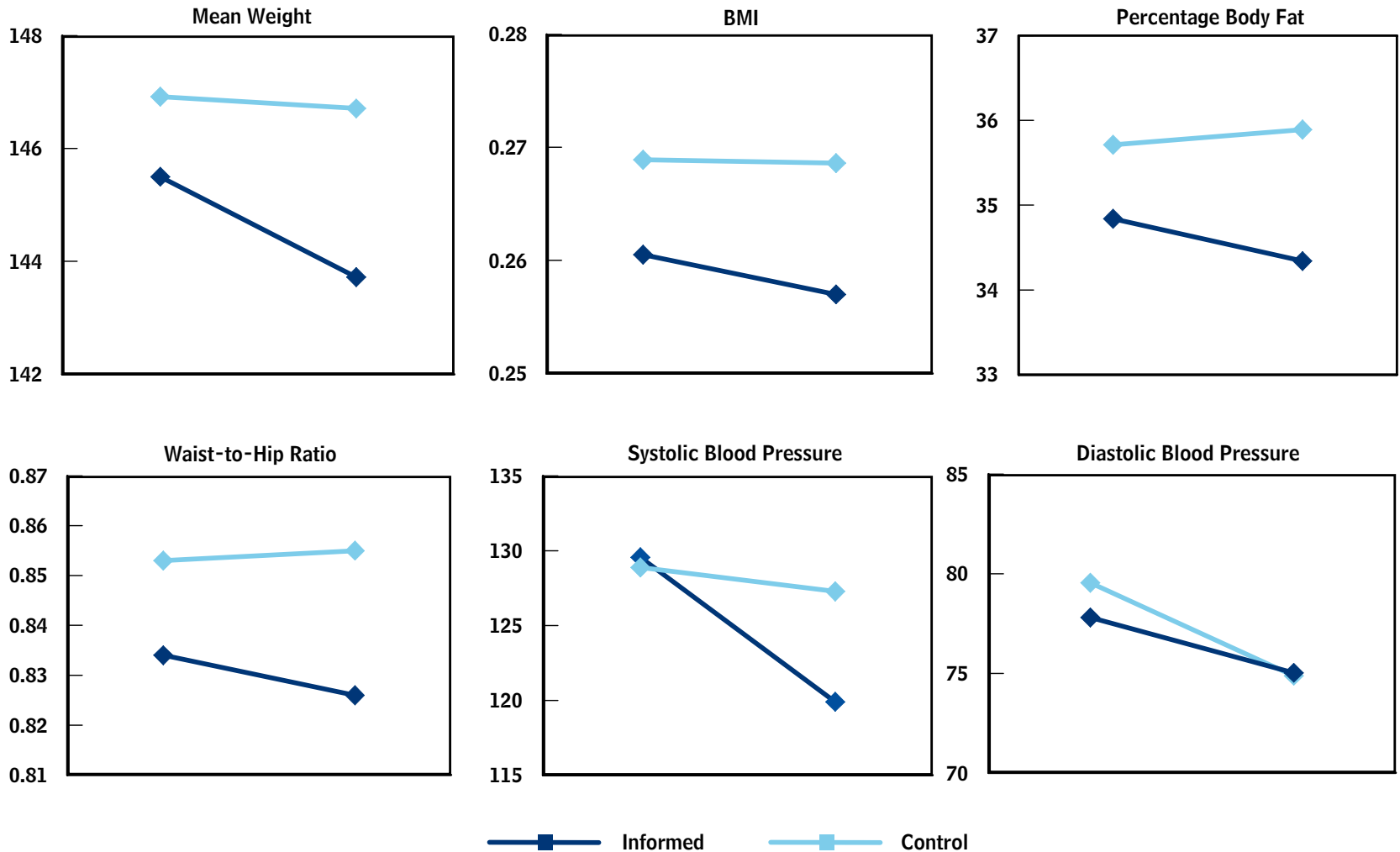
Mean Knee-Specific Pain Scale Score



Source: Moseley and others (2002).



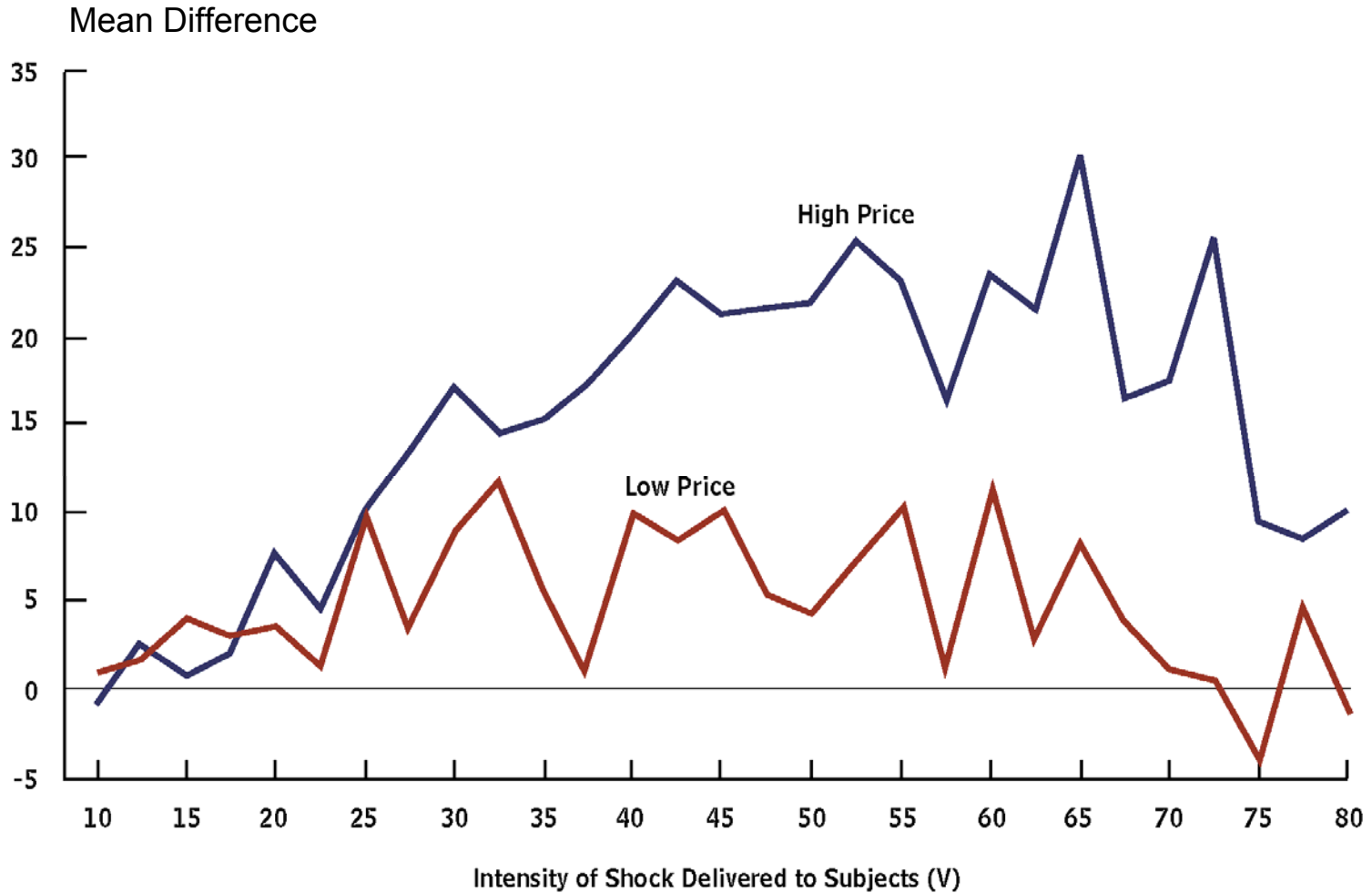
# The Placebo Effect: Fitness Outcomes from “Perceived” Exercise



Source: Crum and Langer (2007).



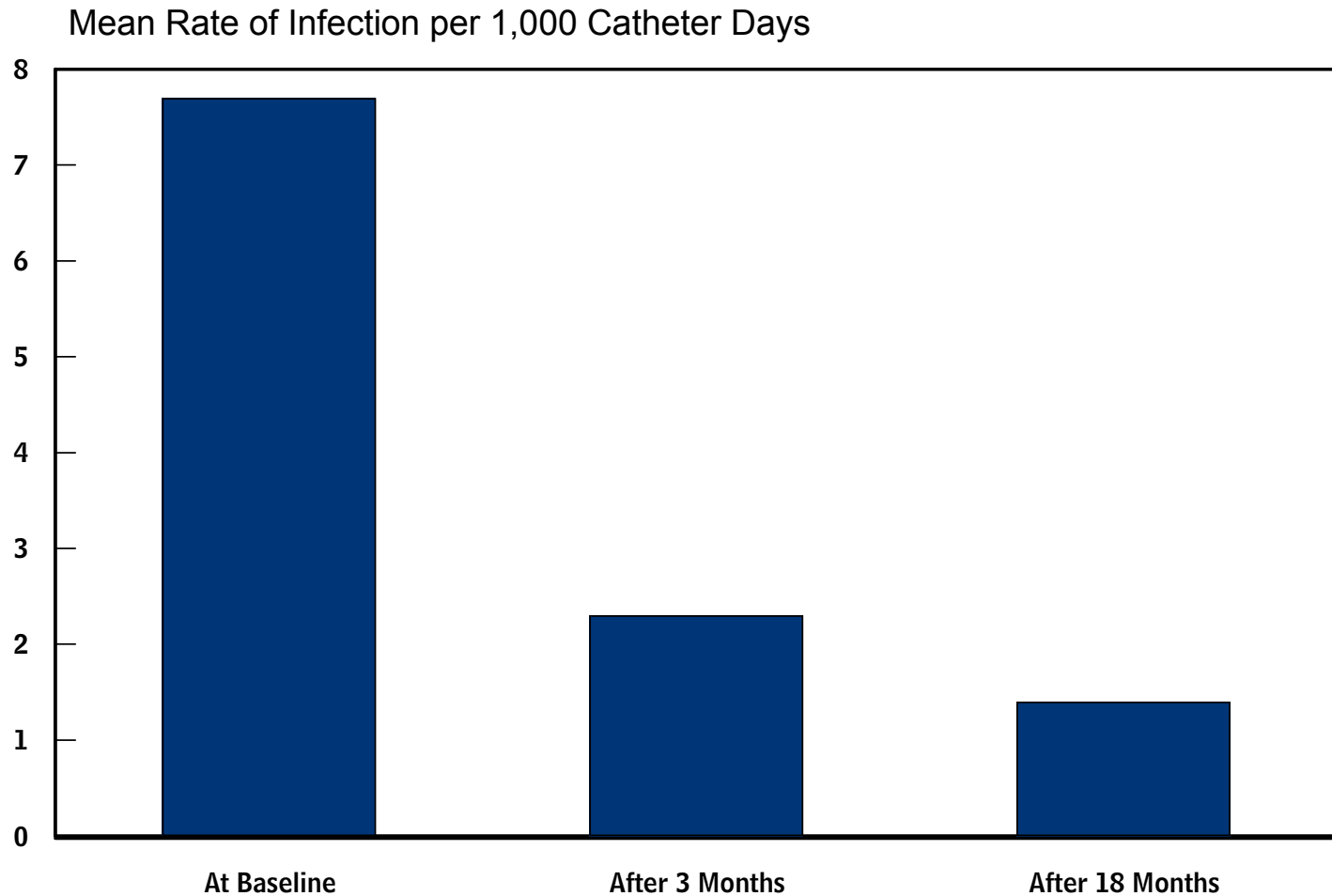
# The Placebo Effect: The Effect of Price on Effectiveness



Source: Waber and others (2008).



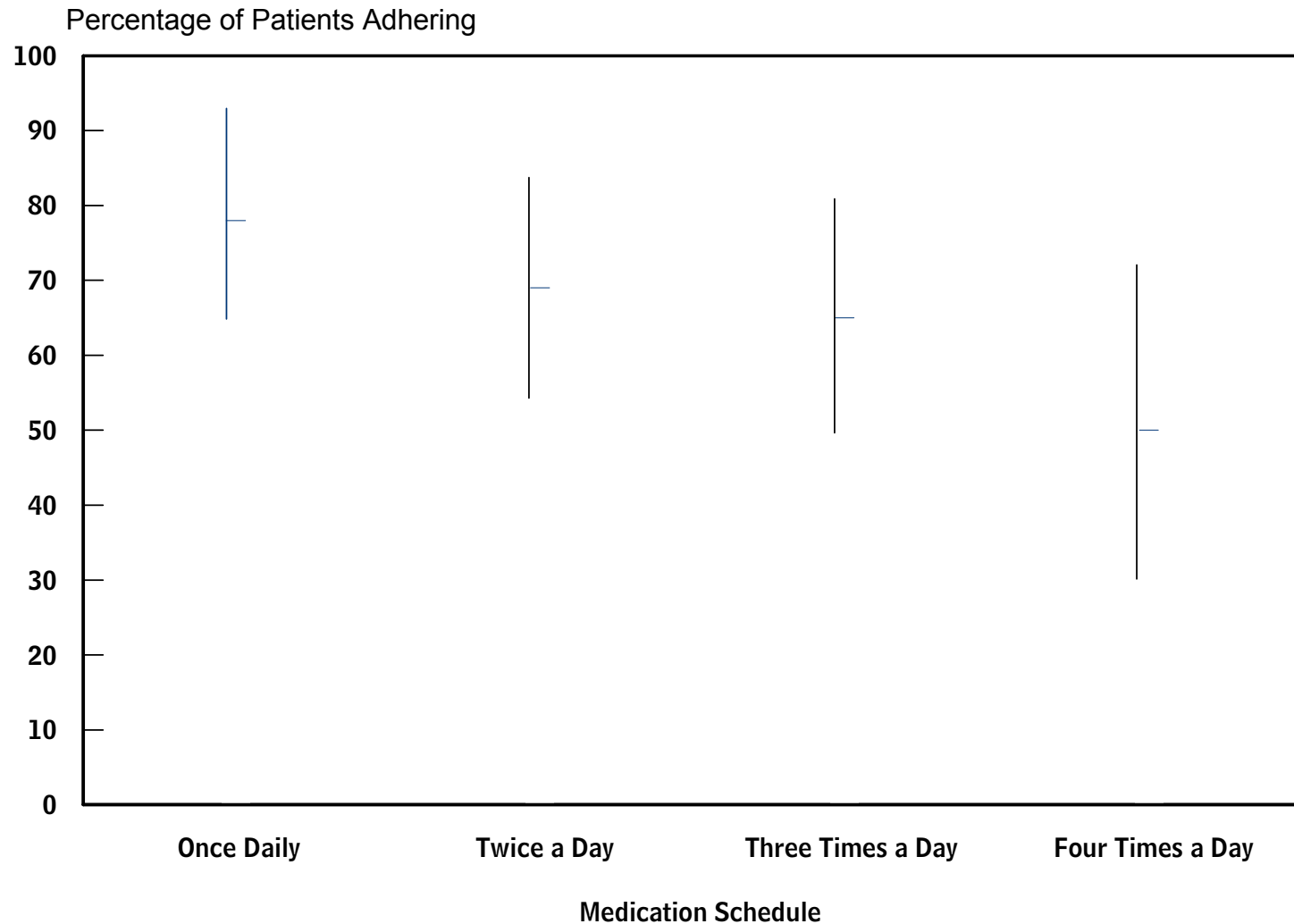
# Shifting Professional Norms: Catheter Infections in Michigan ICUs After Instituting a Checklist



Source: Provonost and others (2006).



# Adherence to Medication Schedule According to Frequency of Dose



Source: Osterberg and Blaschke (2005).



## Adherence to Treatment: Nature and Scope of the Problem

- Average adherence to medication recommendations for nonacute disorders among both pediatric and adult populations: 50%
- Nonadherence is pervasive even under high stakes:
  - 25% of renal transplant recipients regularly miss doses of antirejection medications
  - 42% of glaucoma patients persisted in not adhering to treatment—even after losing sight in one eye
- Doctors are no more accurate than relying on a coin flip in determining who will adhere to treatment and who won't (even among patients they know well)



## Adherence to Treatment: Bedside Manner

- Two-year study on influence of doctors' behavior on adherence to treatment showed that patients were more likely to adhere if:
  - Their doctor scheduled definite future appointments
  - Their doctor answered all of their questions
  - Their doctor enjoyed his/her job





## Adherence to Treatment: Setting Better Defaults

- **Dosing:** Simplicity promotes, while complexity undermines, adherence: e.g., once-a-day dosing.
- **Drug Choice:** Choosing more “forgiving” drugs promotes adherence: e.g., antihypertensive drugs with longer halflives.
- **Bedside Manner:** Seeing patients more often and answering all their questions promotes adherence: e.g., definite follow-up appointments.



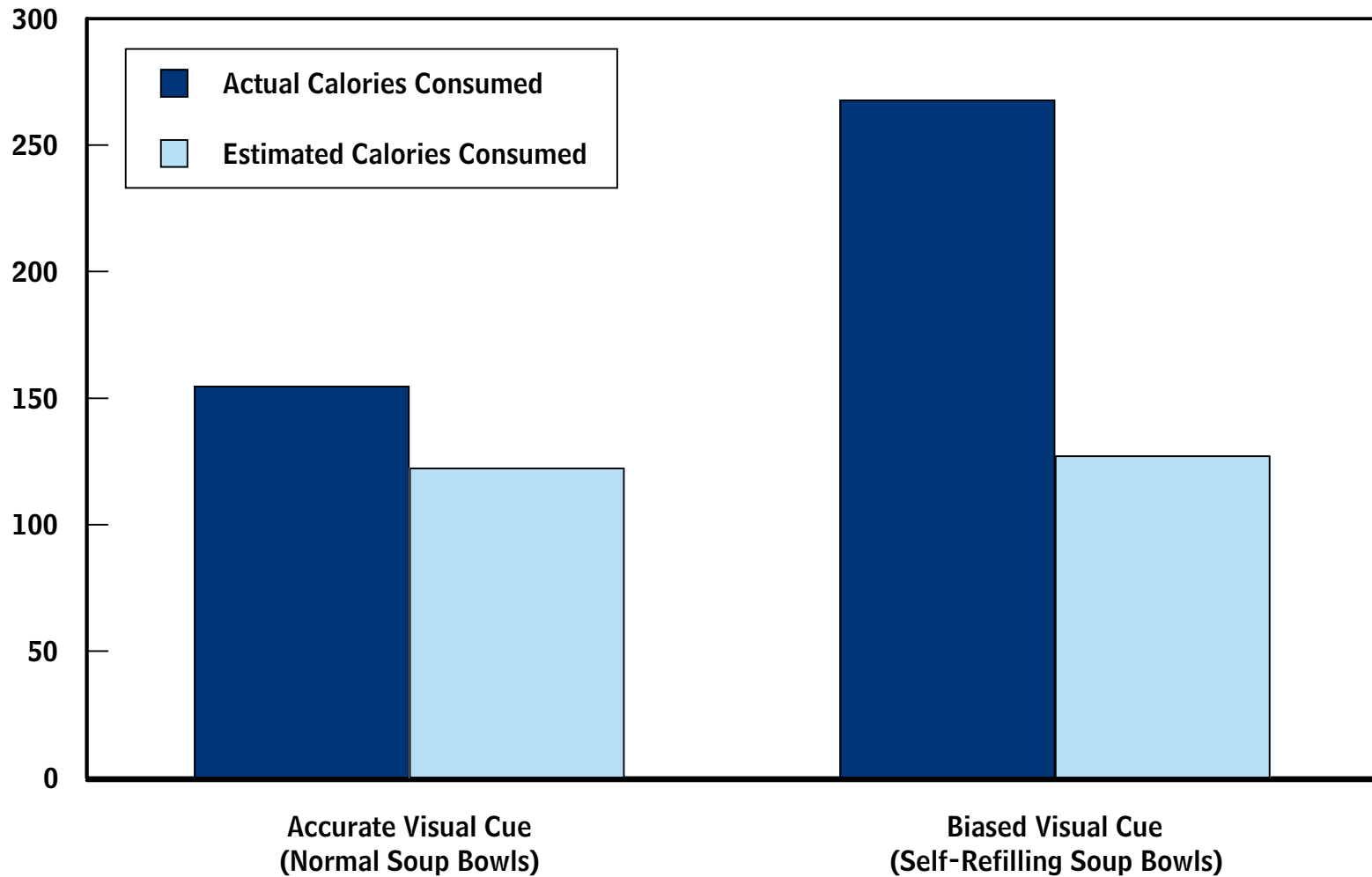
# Bottomless Soup Bowls: The Premise



Source: Wansink (2004).



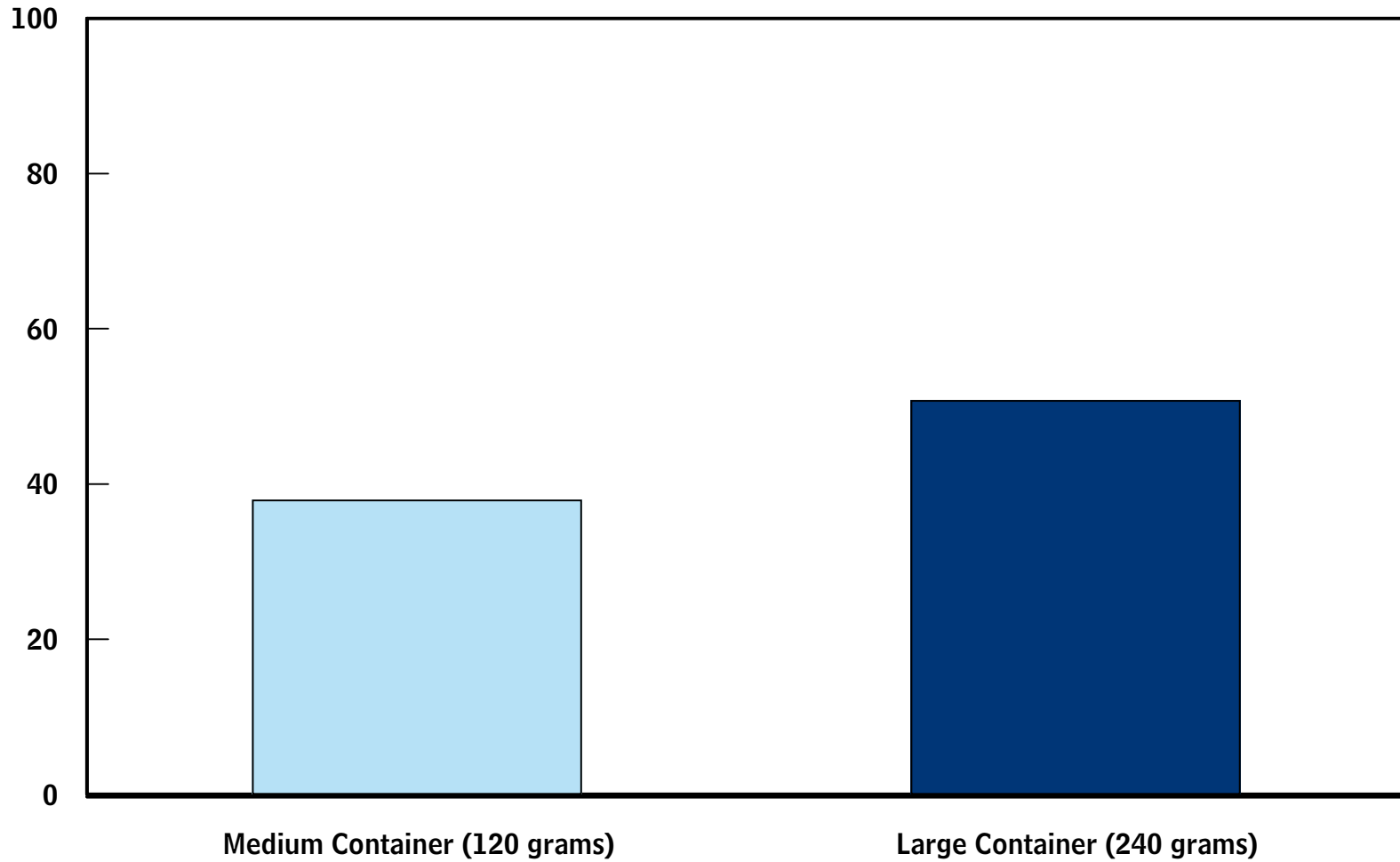
# Bottomless Soup Bowls: Actual and Perceived Intake



Source: Wansink, Painter, and North (2005).



# Influence of Container Size on the Consumption of Stale Popcorn



Source: Wansink and Kim (2005).

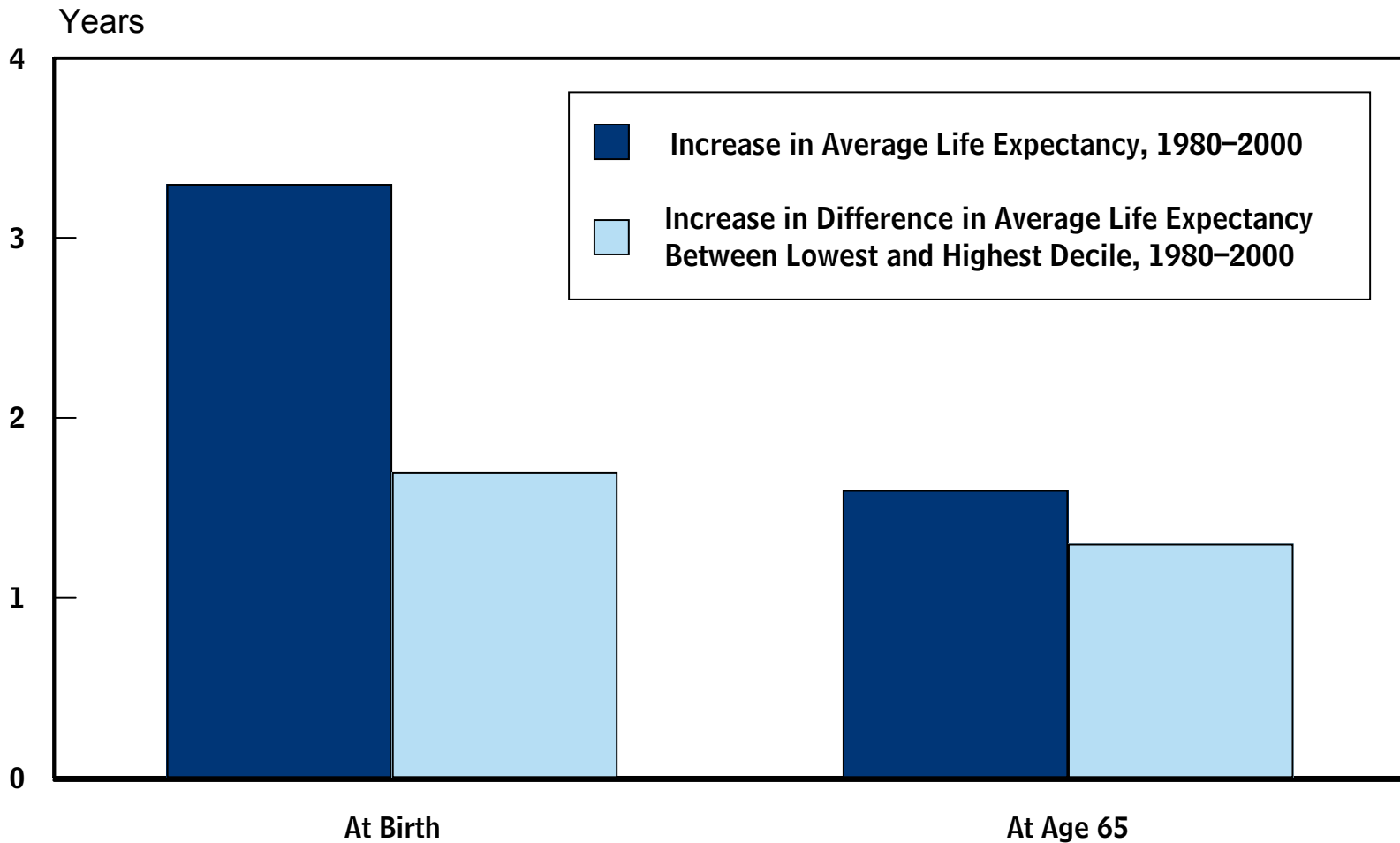


# Some Behavioral Avenues for Reform in Federal Nutrition Programs

- 20 percent of Americans participate in a federal nutrition program
- Supplemental Nutrition Assistance Program
  - Disbursing benefits more frequently could reduce stockpiling and bingeing
- School Lunch Program
  - Placing healthier foods at the front of cafeteria lines could increase their prominence and consumption
  - Decreasing the size of tables could reduce distraction-driven overeating



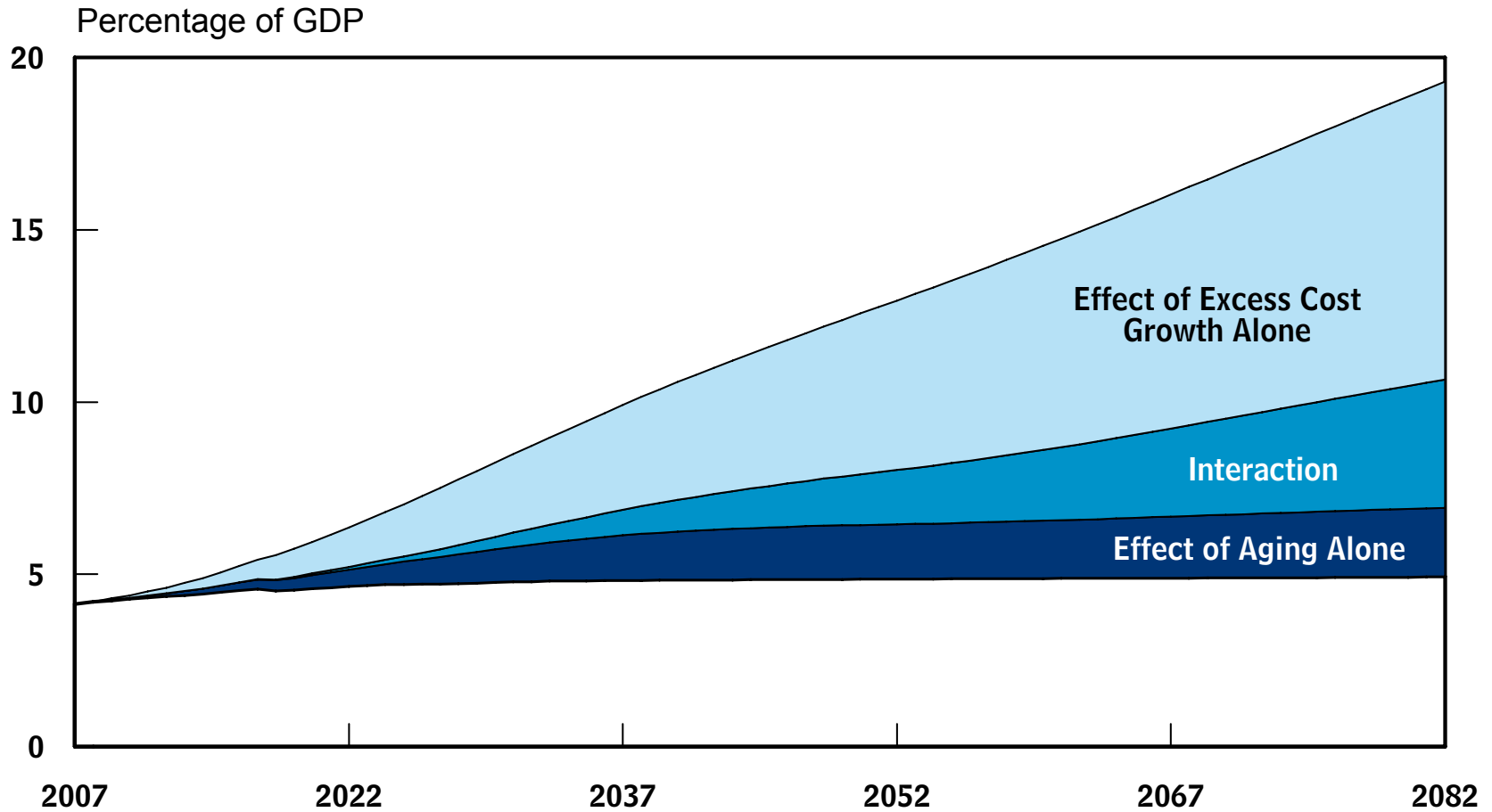
# Increase in Life Expectancy, and Increase in Difference in Life Expectancy by Economic Status



Source: Data from Singh and Siahpush (2006) and CDC.



# Sources of Growth in Projected Federal Spending on Medicare and Medicaid





## Estimated Contributions of Selected Factors to Long-Term Growth in Real Health Care Spending per Capita, 1940 to 1990

Percent

	Smith, Heffler, and Freeland (2000)	Cutler (1995)	Newhouse (1992)
<b>Aging of the Population</b>	2	2	2
<b>Changes in Third-Party Payment</b>	10	13	10
<b>Personal Income Growth</b>	11-18	5	<23
<b>Prices in the Health Care Sector</b>	11-22	19	Not Estimated
<b>Administrative Costs</b>	3-10	13	Not Estimated
<b>Defensive Medicine and Supplier-Induced Demand</b>	0	Not Estimated	0
<b>Technology-Related Changes in Medical Practice</b>	38-62	49	>65





# Excess Cost Growth in Medicare, Medicaid, and All Other Spending on Health Care

Percentage Points

	Medicare	Medicaid	All Other	Total
1975 to 1990	2.9	2.9	2.4	2.6
1990 to 2005	1.8	1.3	1.4	1.5
1975 to 2005	2.4	2.2	2.0	2.1

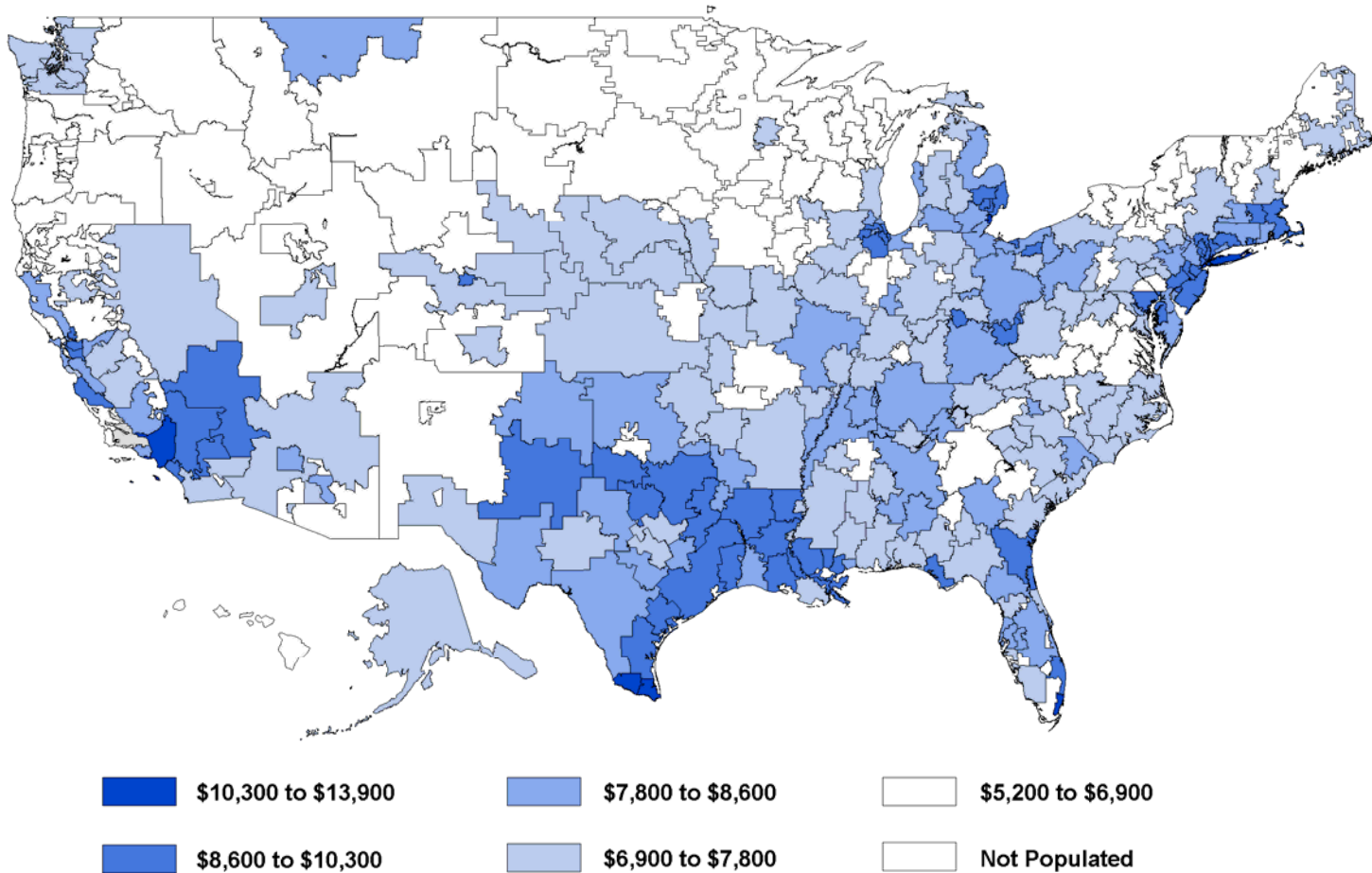


## Before We All Get Too Depressed...

- Embedded in the nation's central long-term fiscal challenge appears to be a substantial opportunity.
- Can we reduce health care costs without impairing health outcomes?

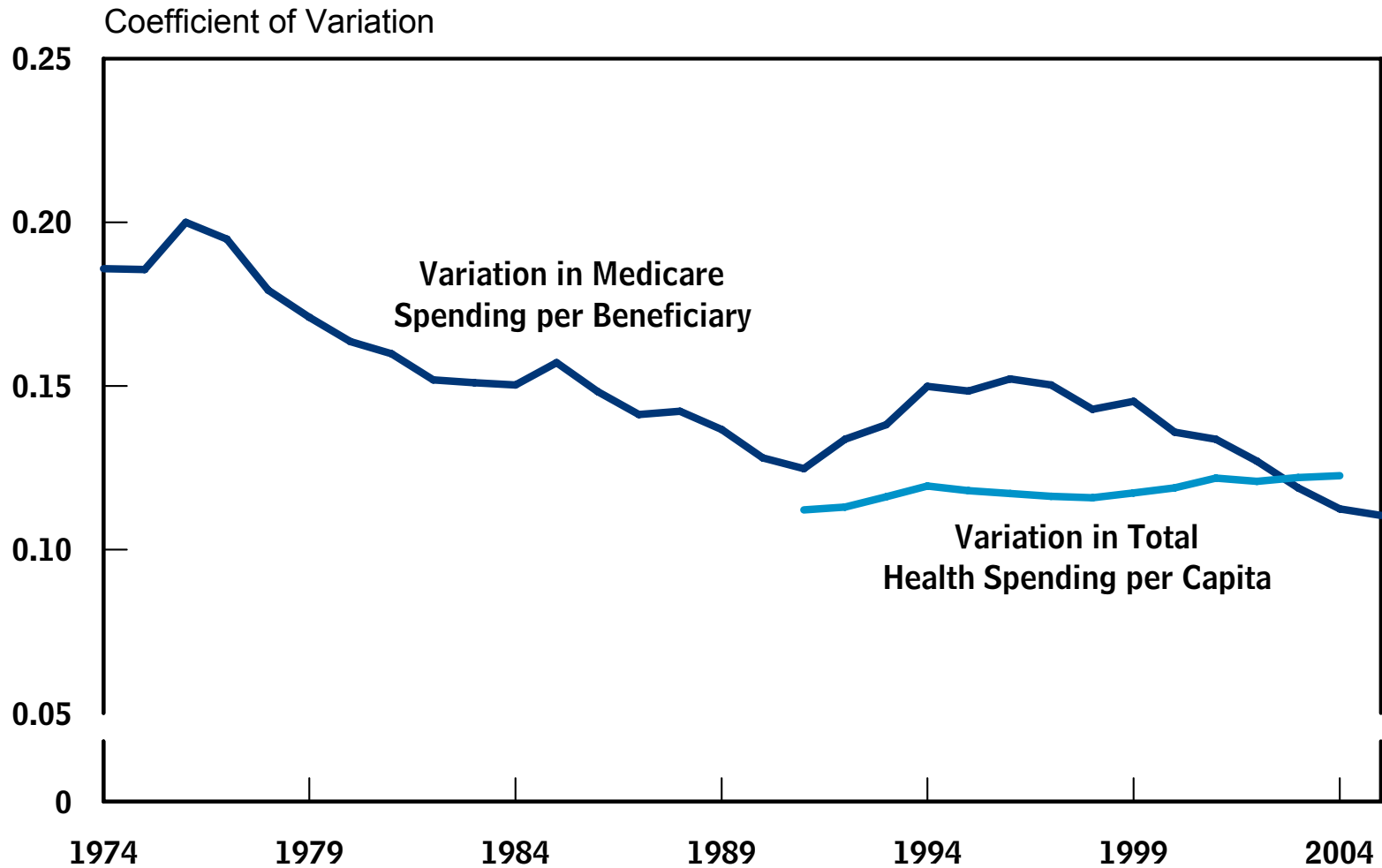


# Medicare Spending per Beneficiary in the United States, by Hospital Referral Region, 2005





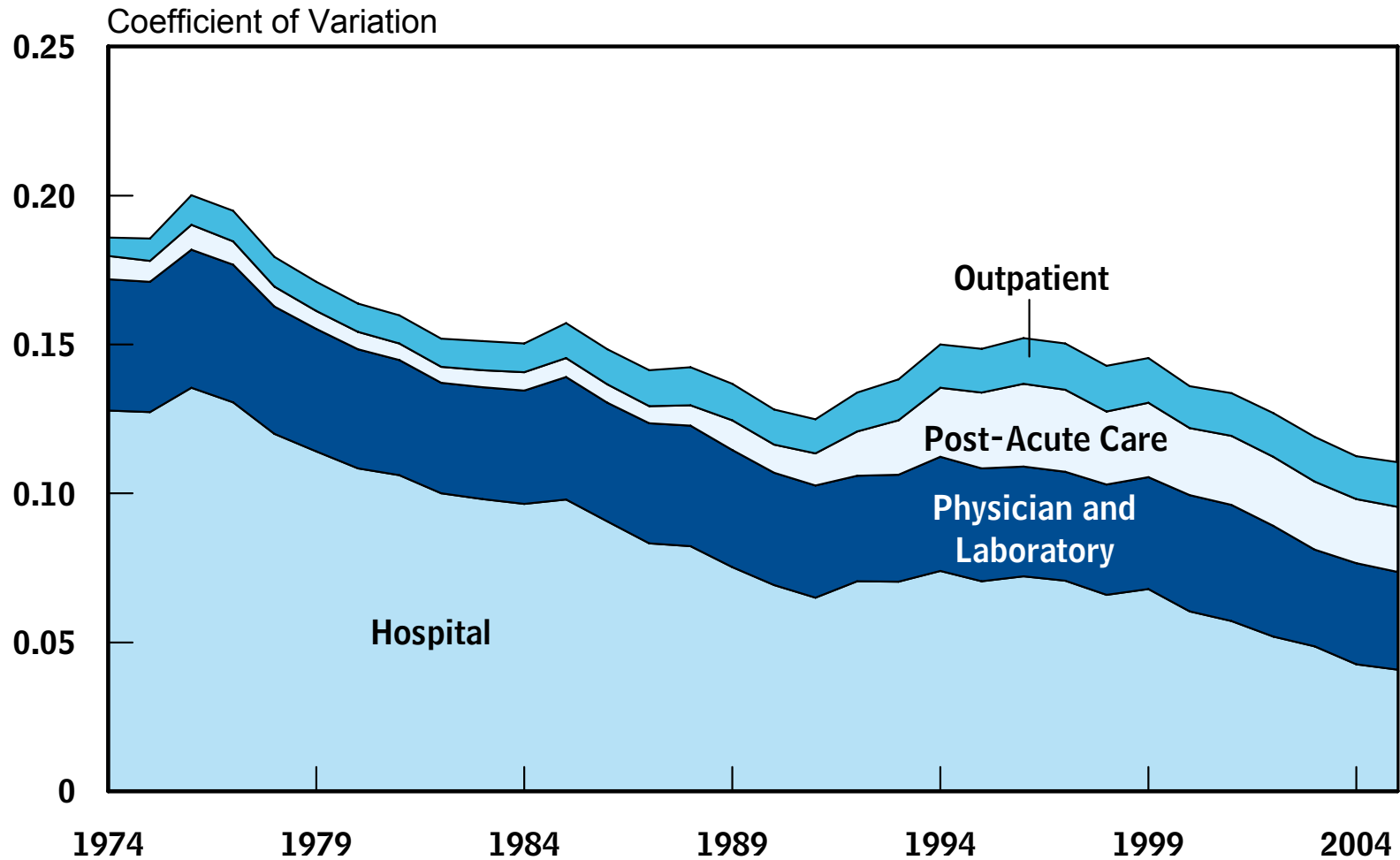
# Variation in State-Level Medicare and Overall Health Care Spending per Capita



Source: Based on data from CMS.



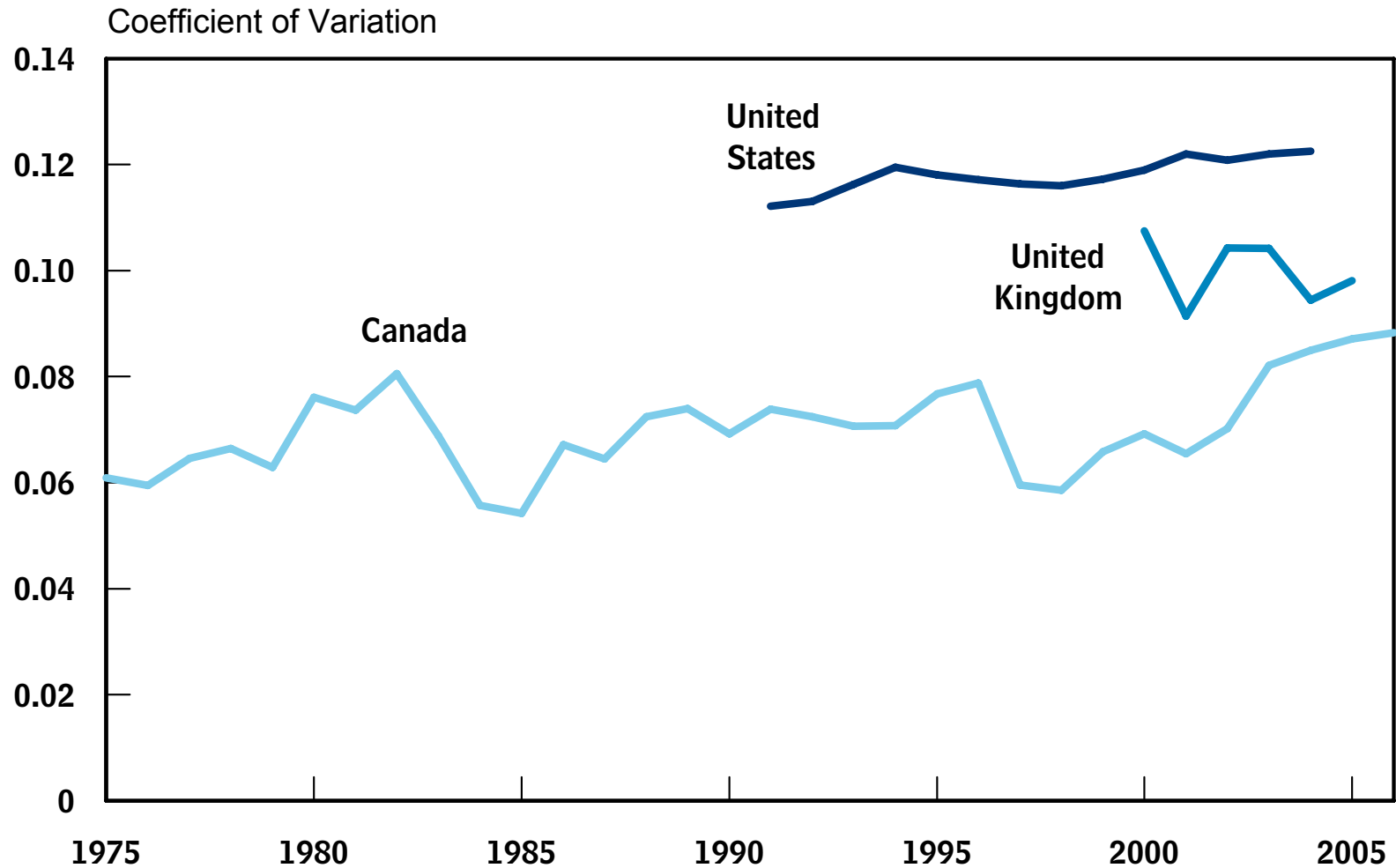
# Contributions of Major Service Categories to State-Level Variation in Medicare Spending per Beneficiary



Source: Based on data from CMS.



# Geographic Variation in Health Care Spending per Capita in Selected Countries



Source: Based on data from CMS, HM Treasury (U.K.), and the Canadian Institute for Health Information.



## Variations Among Academic Medical Centers

*Use of Biologically Targeted Interventions and Care-Delivery Methods Among Three of U.S. News and World Report's "Honor Roll" AMCs*

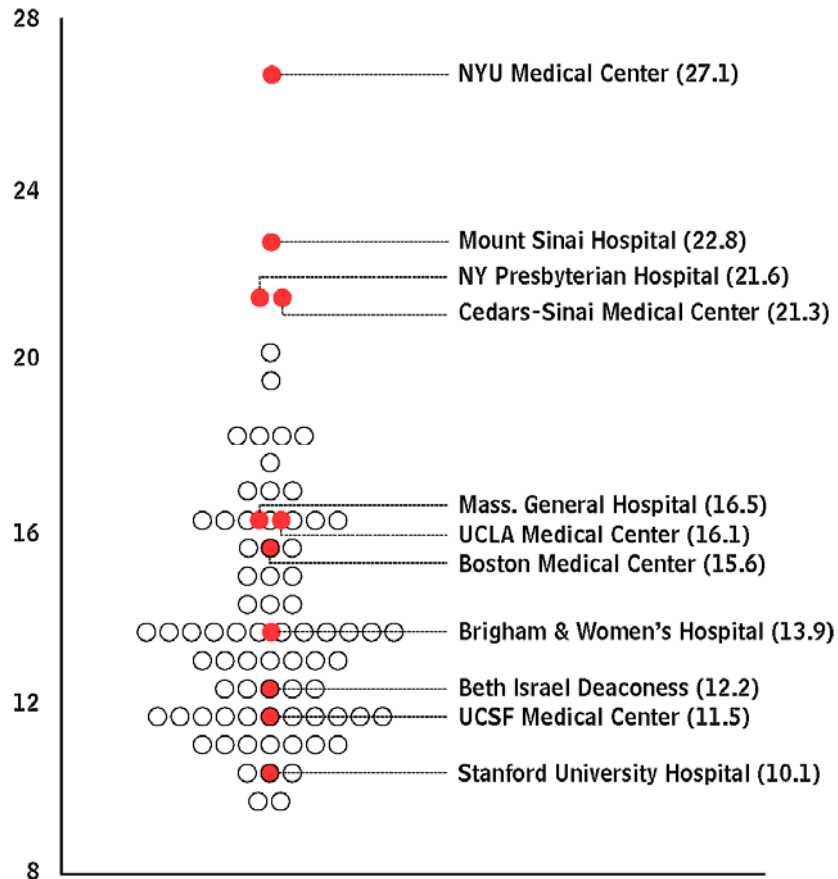
	<b>UCLA Medical Center</b>	<b>Massachusetts General Hospital</b>	<b>Mayo Clinic (St. Mary's Hospital)</b>
<b>Biologically Targeted Interventions: Acute Inpatient Care</b>			
CMS composite quality score	81.5	85.9	90.4
<b>Care Delivery—and Spending—Among Medicare Patients in Last Six Months of Life</b>			
Total Medicare spending	50,522	40,181	26,330
Hospital days	19.2	17.7	12.9
Physician visits	52.1	42.2	23.9
Ratio, medical specialist / primary care	2.9	1.0	1.1

Source: Elliot Fisher, Dartmouth Medical School.



# Variations Among Academic Medical Centers

## *Supply-Sensitive Care: Days in the Hospital for Patients During the Last Six Months of Life*





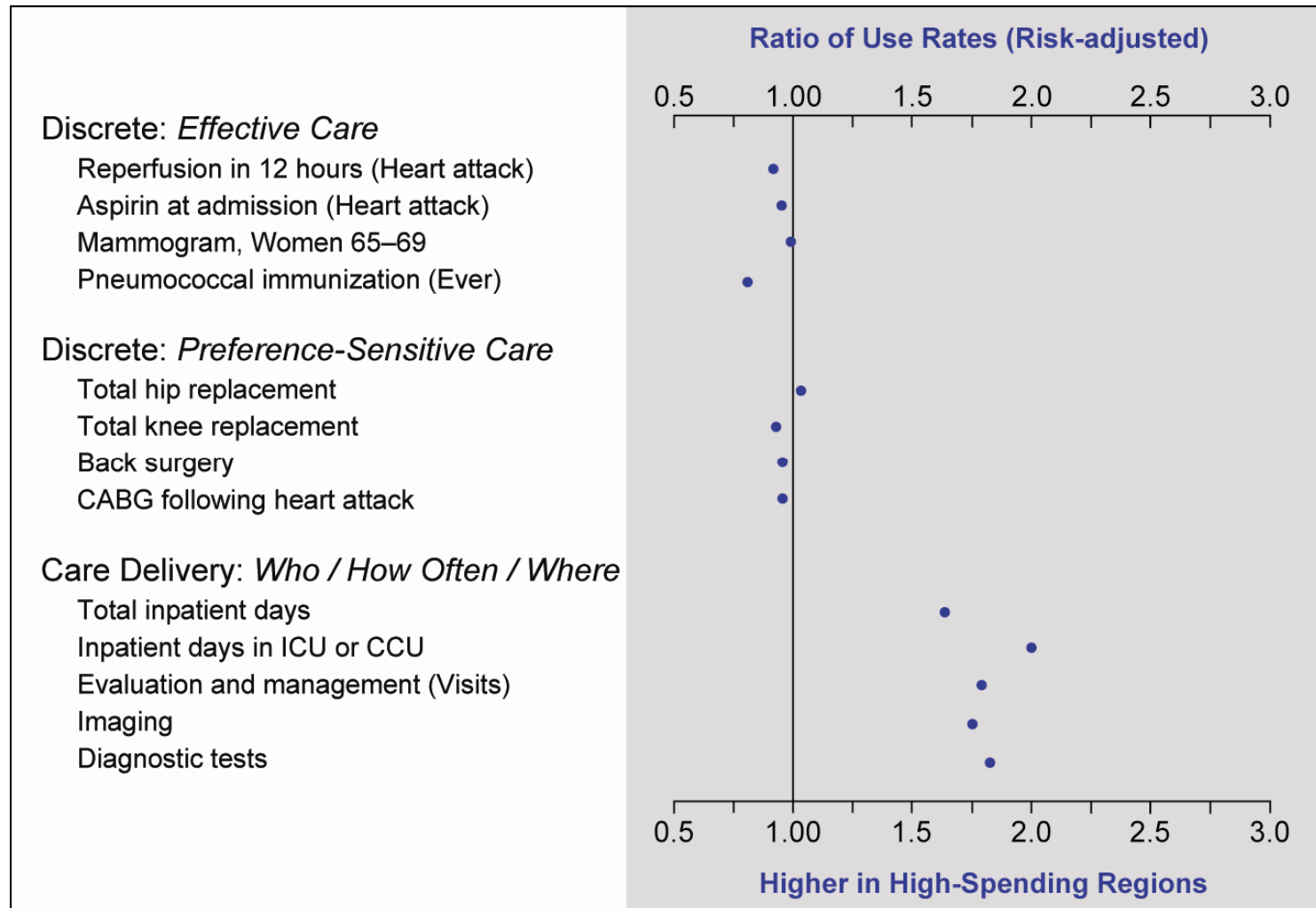


# The Relationship Between Quality of Care and Medicare Spending, by State, 2004





# What Additional Services Are Provided in High-Spending Regions?



Source: Elliot Fisher, Dartmouth Medical School.



# CBO's Activities in Analyzing Health Care

- New Hires and Expanded Staffing
  - New deputy assistant director in the Budget Analysis Division
  - Increase in health staff agencywide from 30 FTEs to 50 FTEs
- Reports and Analysis in 2008
  - Critical Topics in Health Reform
  - Health Options