CECS
Center for the
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Clinical Sciences

The Ultimate Question: Should we invest billions of dollars to expand physician training rates?

David C. Goodman, MD MS

Professor of Pediatrics and of Community and Family Medicine

The Center for the Evaluative Clinical Sciences
Dartmouth Medical School
Hanover, NH

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Or....

Is Increasing Physician Training Rates a Slam Dunk?

What are the desirable outcomes of investing in the medical workforce?

- **Access:**
  to care when it is wanted and needed.
- **Quality:**
  Care that is technically excellent and personally compassionate.
- **Outcomes:**
  Care that improves the health and well being of patients and populations.
- **Costs:**
  Care that is affordable to the patient and to society.

If we agree on the desirable outcomes...

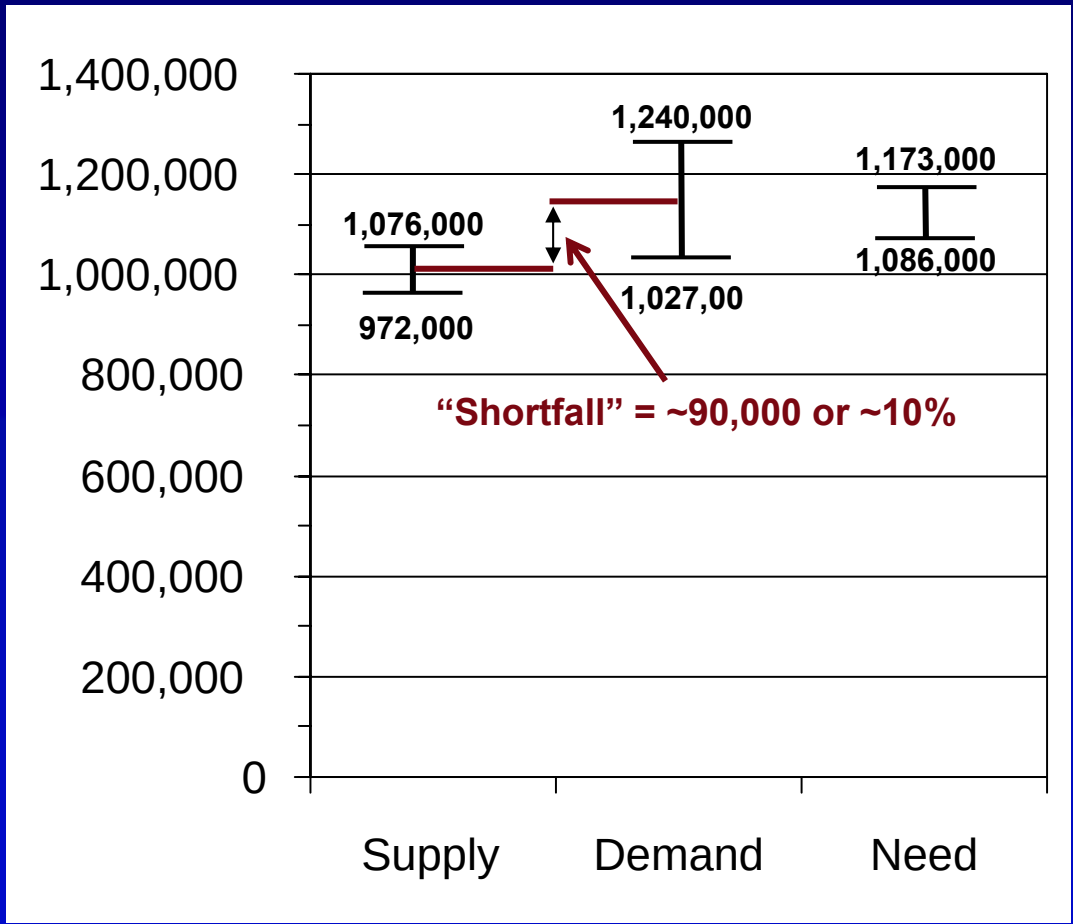
Then the question is:

What are the most effective and efficient ways to achieve these ends?

Is there evidence that access, quality, and outcomes are sensitive to physician supply, per se?

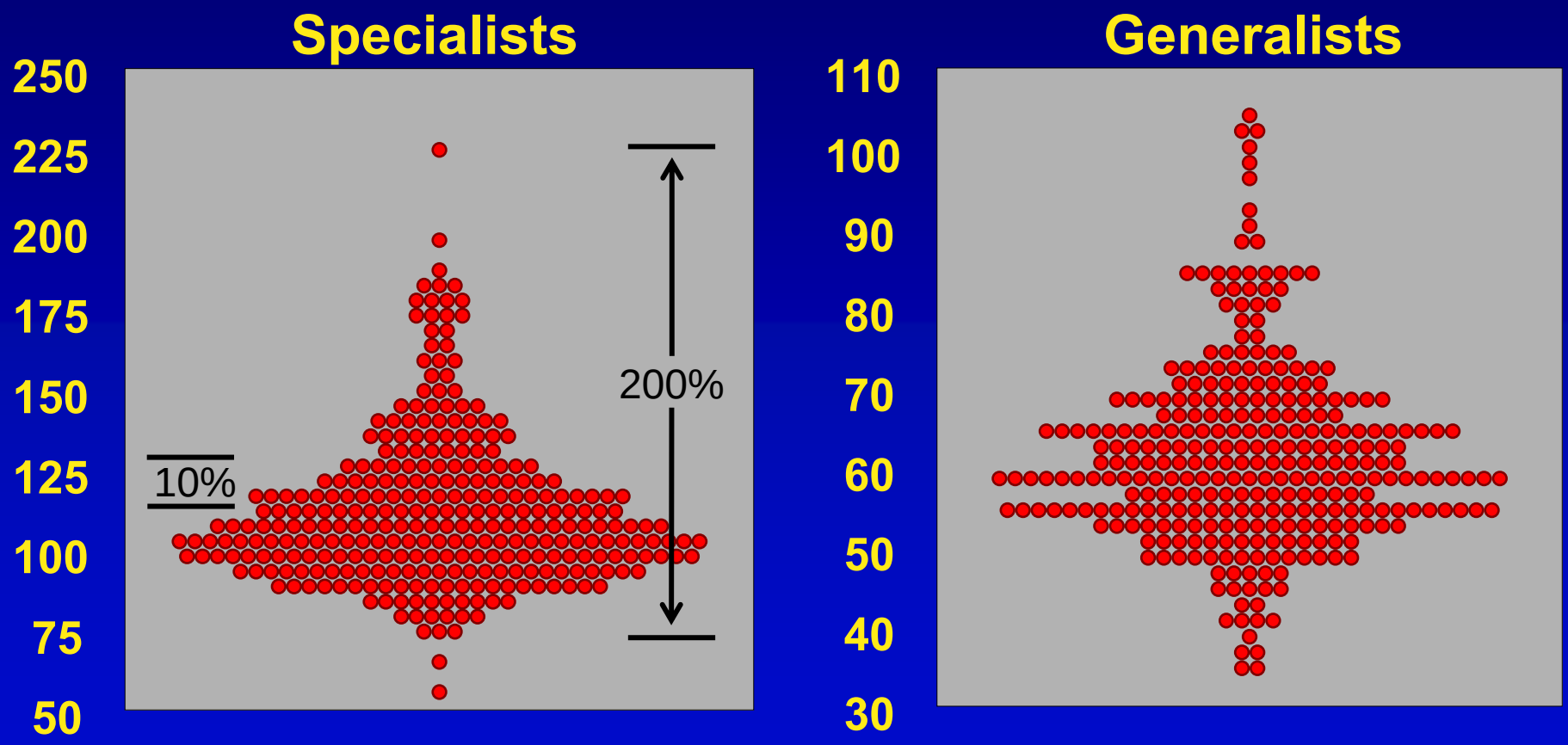
The 2020 "Shortfall" in Physicians

Physician Supply, Demand, and Need in the U.S. 2020



Council on Graduate Medical Education. Sixteenth Report. 2005.

The Per Capita Supply of Physicians Varies ~200% Across Regions



Dartmouth Atlas Hospital Referral Regions

Post-GME clinicians per 100K population age sex race adjusted - 1996

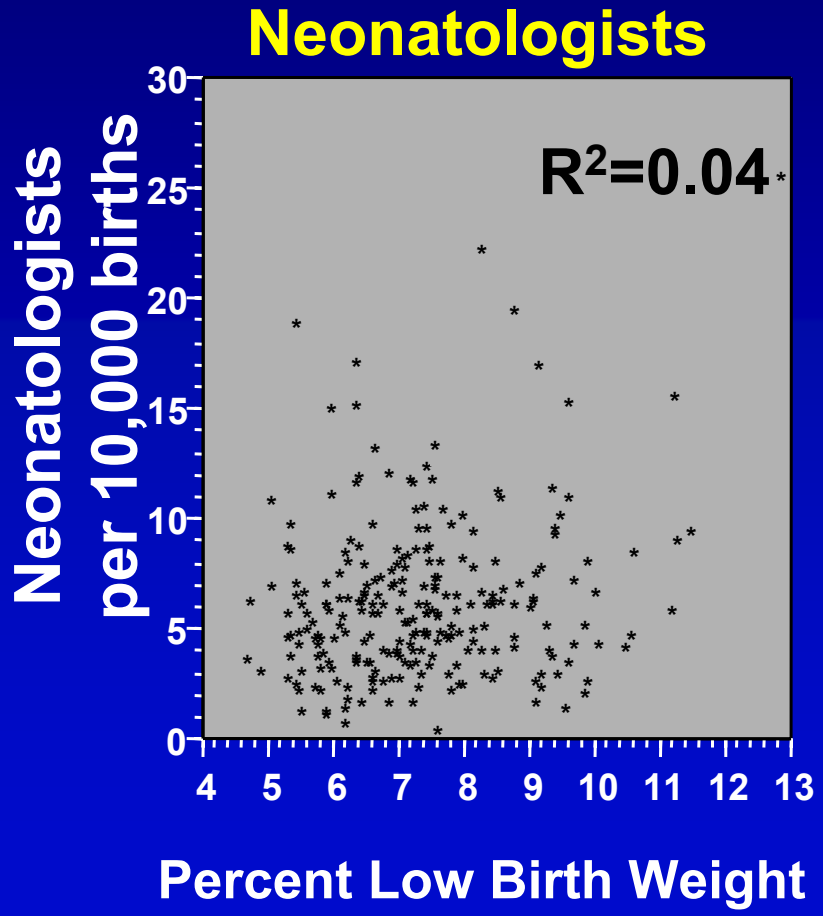
Regional variation in physician supply is not explained by:

- **Patient health status or health risk**

  Chan R, et al. *Pediatrics* 1997.
  Goodman D, et al. *Pediatrics* 2001.
  Wennberg J. Ed. *Dartmouth Atlas of Health Care*. Various editions. 1996 - 2006.
  Fisher E, et al. Ann Int Med 2003.

Are neonatologists located where newborn needs are greater?

(246 Neonatal Intensive Care Regions)

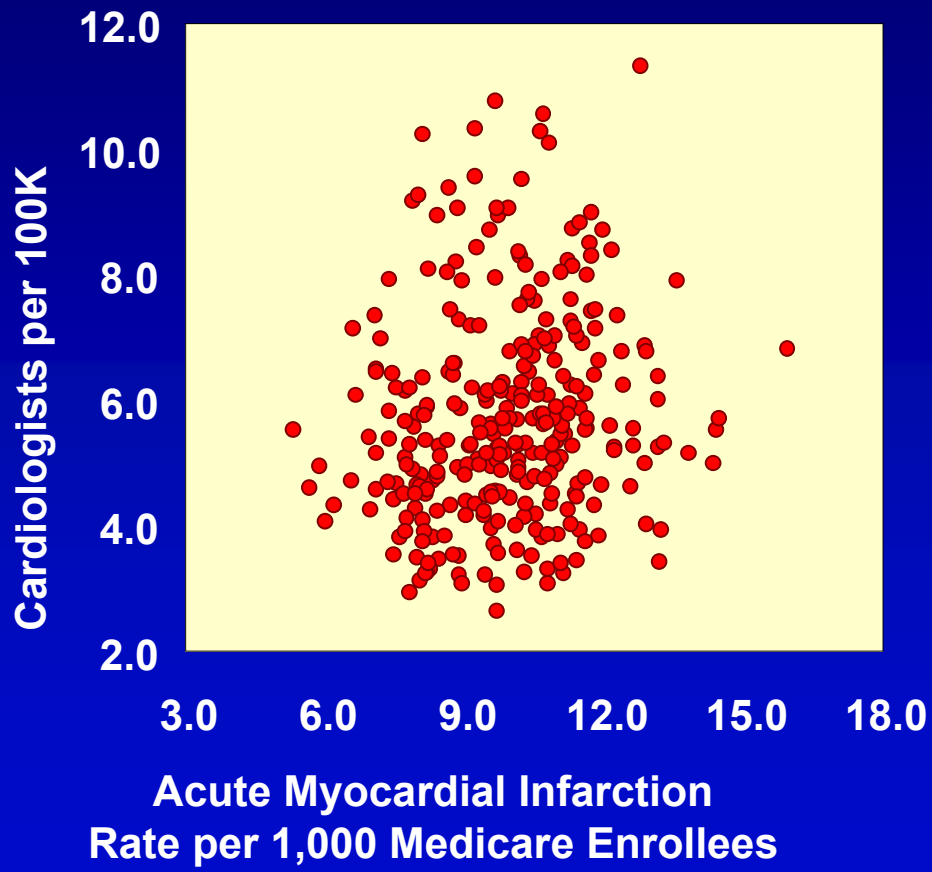


There is virtually no relationship between regional physician supply and health needs.

Goodman, et al. *Pediatrics*, 2001.

Are cardiologists located where cardiac needs are greater?

(306 Hospital Referral Regions, Dartmouth Atlas)



There is virtually no relationship between regional physician supply and health needs.

Source: Wennberg, et al. *Dartmouth Cardiovascular Atlas*

Regional variation in physician supply is not explained by:

- Patient health status or health risk
- **Patients preference for care**

Fisher E, et al. Ann Int Med 2003.
NIA-CMS beneficiary survey, forthcoming.

No difference in preferences for aggressive care (dying in hospital, mechanical ventilation, or drugs that would lengthen their life, but make them feel worse)

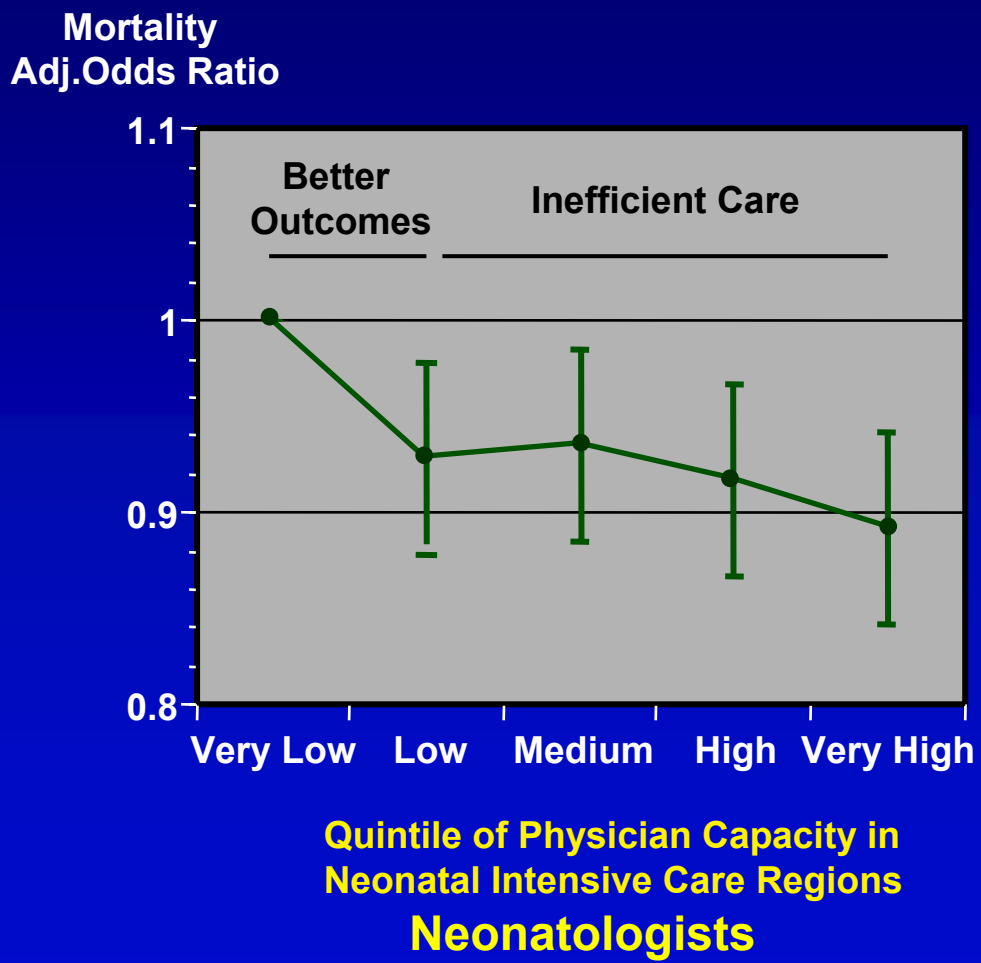
No differences in concerns about getting too little (or too much) treatment

So what?

Despite the idiosyncratic location of physicians...

maybe more physicians leads to better health outcome.

Do areas with higher physician supply have better health outcomes?



- Logistic models 1995 US birth cohort
- N = 3.8 million live births
- Dependent variable: 28 day mortality

Beyond a very low supply, outcomes are insensitive to physician supply.

Source: Goodman, et al. New Engl J Med, 2002

With Similar Outcomes, Many Health Care Systems Deliver Care with Far Fewer Physicians

Standardized Physician Labor Input During Last 6 Months of Life Among Medicare Cohorts

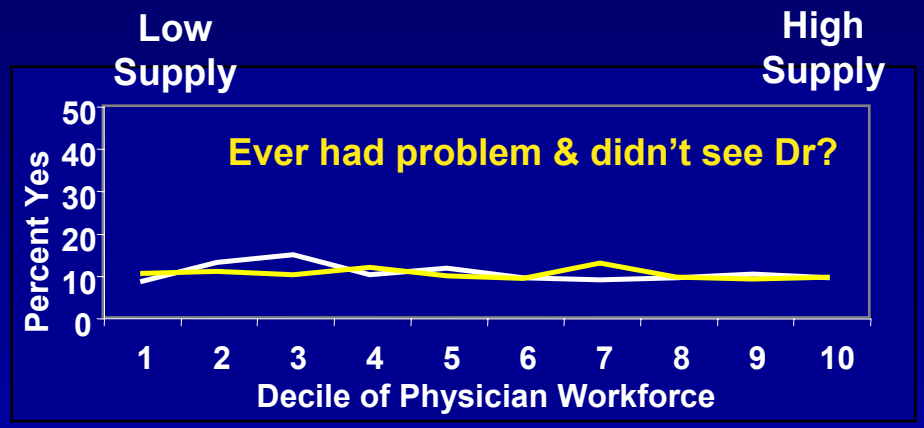
(Full Time Equivalents per 1,000 beneficiaries)

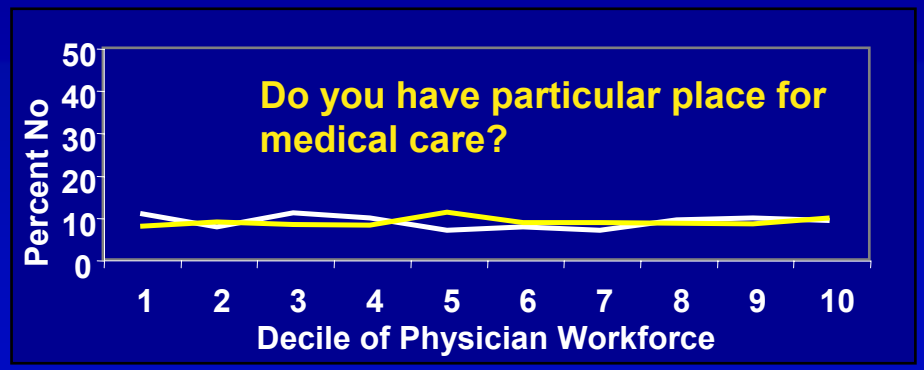
	Mean Age	Total FTEs	Primary Care	Medical Specialists
NYU Medical Center	82	28.3	8.8	15.0
RWJ University Hospital (NJ)	80	19.8	4.3	12.2
Montefiore Med Center (NY)	83	16.5	6.5	7.1
MA General Hospital	80	15.3	6.3	5.5
Johns Hopkins Hospital	77	12.2	5.0	3.9
Yale-New Haven	82	10.6	3.4	4.4
UC, San Francisco	81	9.4	4.7	3.2
Mayo, Rochester MN	81	8.9	3.0	3.9
Strong Memor., Rochester,NY	81	8.1	3.8	2.4

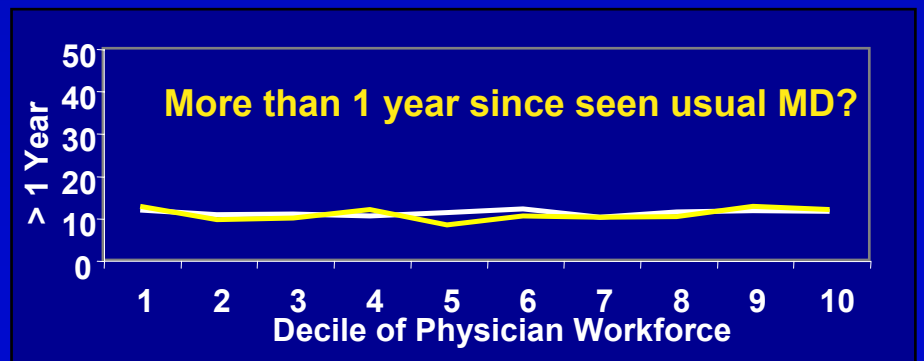
Source: Goodman, Health Affairs,March/April 2006.

Perhaps more physicians improve access?

- Dartmouth Atlas HRRs
- 1996 post-GME physicians
- 1992-96 Medicare Current Beneficiary Survey
- Nationally representative sample
- N=approx. 20,000
- Detailed in-person interviews



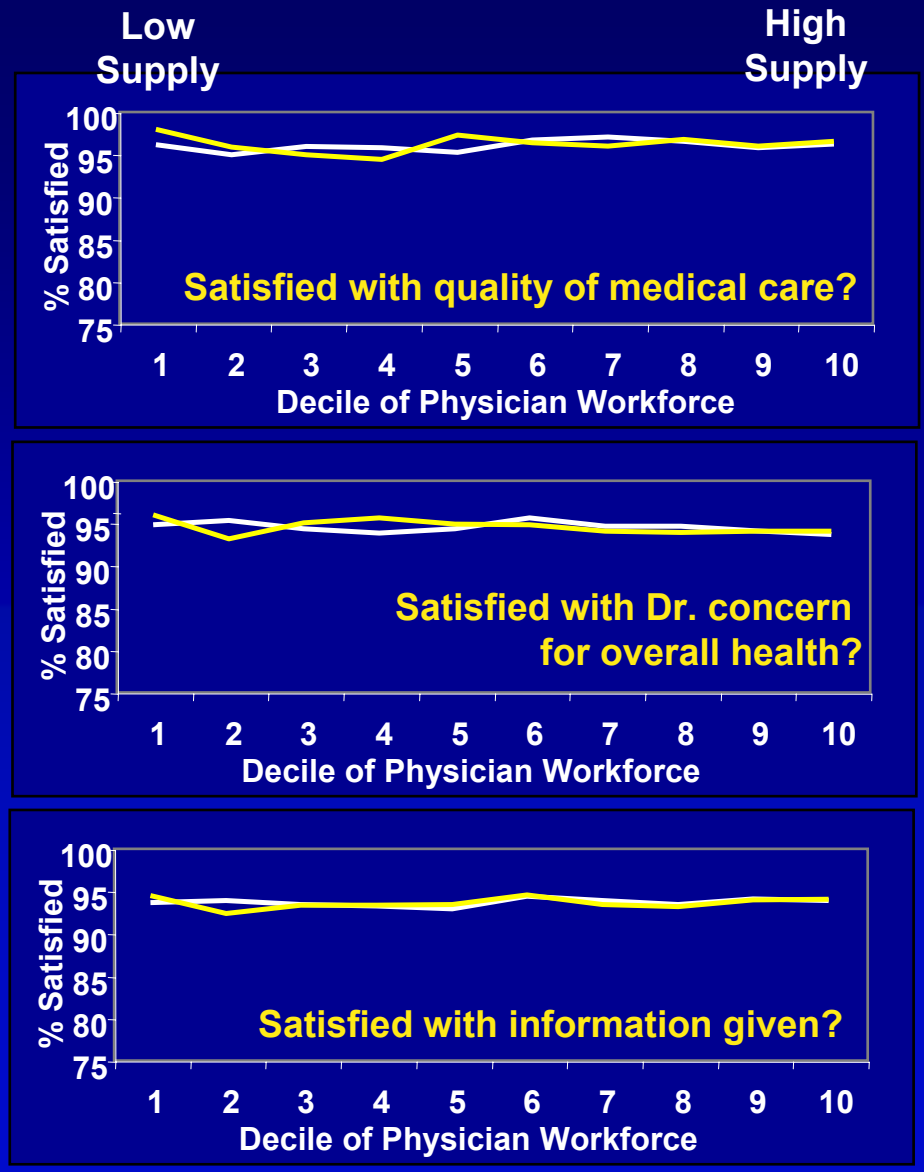




Source: Dartmouth Atlas Working Group

Perhaps more physicians improve patient satisfaction?

- Dartmouth Atlas HRRs
- 1996 post-GME physicians
- 1992-96 Medicare Current Beneficiary Survey
- Nationally representative sample
- N=approx. 20,000
- Detailed in-person interviews



Source: Dartmouth Atlas Working Group

So what?

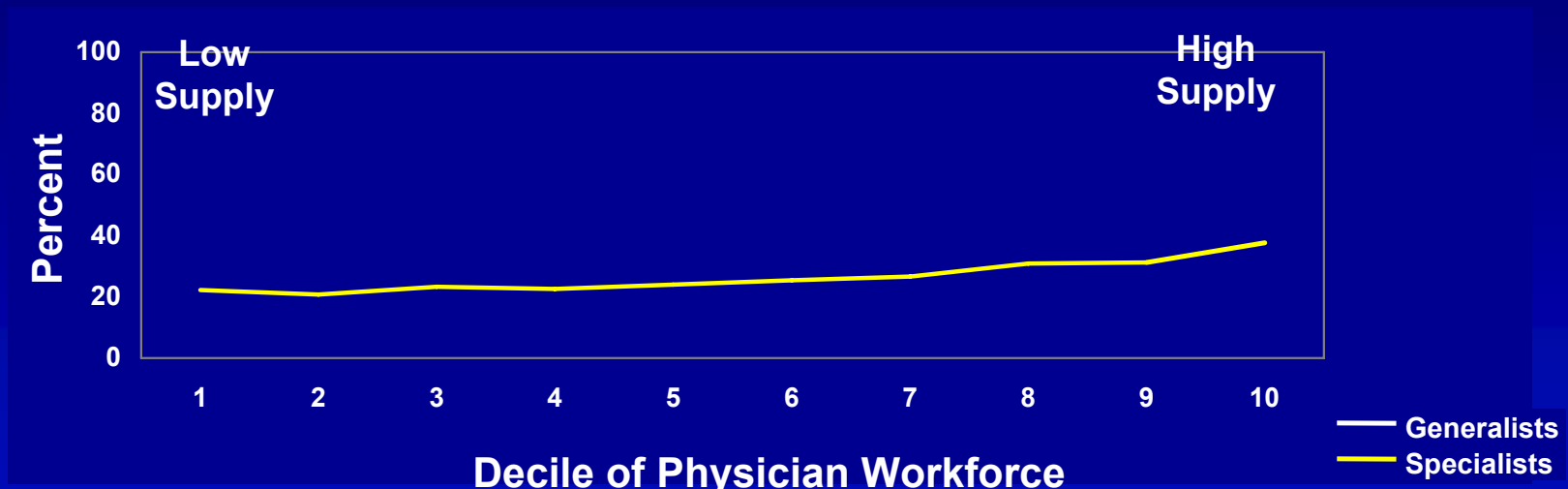
Yes, physician are located idiosyncratically.

And maybe outcomes aren't sensitive to physician supply.

Still, would an increase in physician training rates cause any *harm?*

Unintended Consequences of High Physician Supply:

Percent of Patients seeing ≥ 10 Different Physicians in Last 6 Months of Life



- Dartmouth Atlas HRRs
- 1999 post-GME physicians
- Medicare beneficiaries with chronic illness
- Last 6 months of life

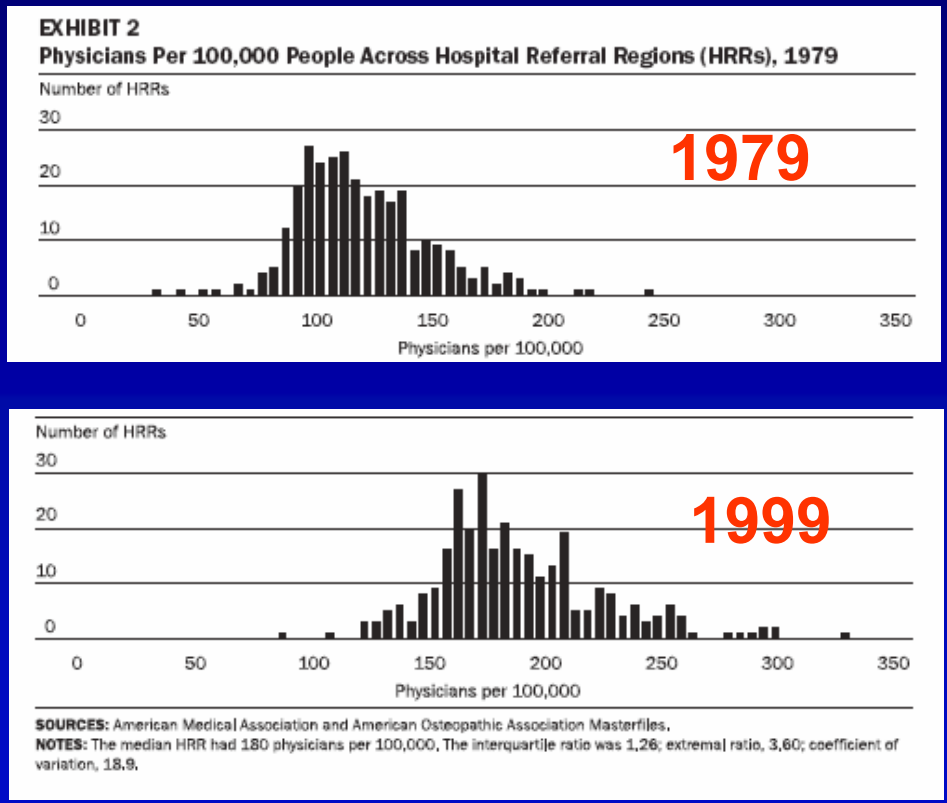
Source: Dartmouth Atlas Working Group

High Physician Supply/Cost Regions:

- Greater tendency for physicians to use aggressive instead of conservative treatment.
- Physicians perceive care to be less available, less able to provide quality care.
- Less likely to provide primary care.
- More likely to be in 1 or 2 physician practices.
- Lower perceived access by patients.
- No better patient satisfaction.
- Worse technical quality.
- No better, and sometimes worse outcomes

Sirovich B, et al. Ann Int Med 2006. Sirovich B, et al. Arch Int Med 2005.
Wennberg J. Ed. *Dartmouth Atlas of Health Care*. Various editions. 1996 - 2006.
Fisher E, et al. Ann Int Med 2003; Fisher E, at al. Health Affairs 2004; Fisher E, et al. Health Affairs 2005.
Goodman D, et al. Health Affairs 2006.

Where do more physicians go?



Number of Regions

Number of Atlas Regions by Physicians per 100,000 population

For every physician that settled in a low supply region, *4 physicians settled in a high supply region.*

These are the regions associated with lower quality and higher costs.

Source: Goodman. Health Affairs, 2004.

What about the costs of expanding medical schools and removing the Medicare GME funding cap?

The silence is deafening...

Where would you invest $5-10 billion per annum of public money in the health care system?

- Implementation of the U.S. Preventive Services Task Force recommendations.
- Increasing immunization rates.
- Rewarding health care systems for improved outcomes.
- Expanding insurance coverage to children (S-CHIP).
- Health insurance for returning Iraq war vets who aren't covered at their jobs.

- Increasing physician training rates?

The Ultimate Answer to Where We Should Invest Billions of Dollars...

To improve access, quality, outcomes, and costs:

Invest in improving what doctors do.

Invest in incentives for physicians to practice in very low supply regions.

Invest in the improved organization of care.

Invest to insure the uninsured.

Increasing physician training rates, ceteris paribus, is a very poor investment.

The Center for the Evaluative Clinical Sciences
Dartmouth Medical School

Collaborators

- John Wennberg, MD MPH
- Elliott Fisher, MD MPH
- George Little, MD
- Therese Stukel, PhD
- Jonathan Skinner, PhD
- Katherine Baiker, PhD
- Julie Bynum, MD
- Scott Shipman, MD MPH
- Douglas Staiger, PhD
- Amitabh Chandra, PhD
- James Weinstein, MD MS
- David Wennberg, MD MPH
- Sally Sharp, SM
- Stephanie Raymond
- Phyllis Wright-Slaughter, MHA
- Daniel Gottlieb, MS
- Kristen Bronner, MA
- Vin Fusca, MMS
- Megan McAndrews, MBA, MS
- David Bott, PhD
- Stephen Mick, PhD (VCU)
- Chiang-hua Chang, MS
- Nancy Marth, MS
- Jon Lurie, MD MS
- Ken Schoendorf, MD MPH (CDC/NCHS)

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