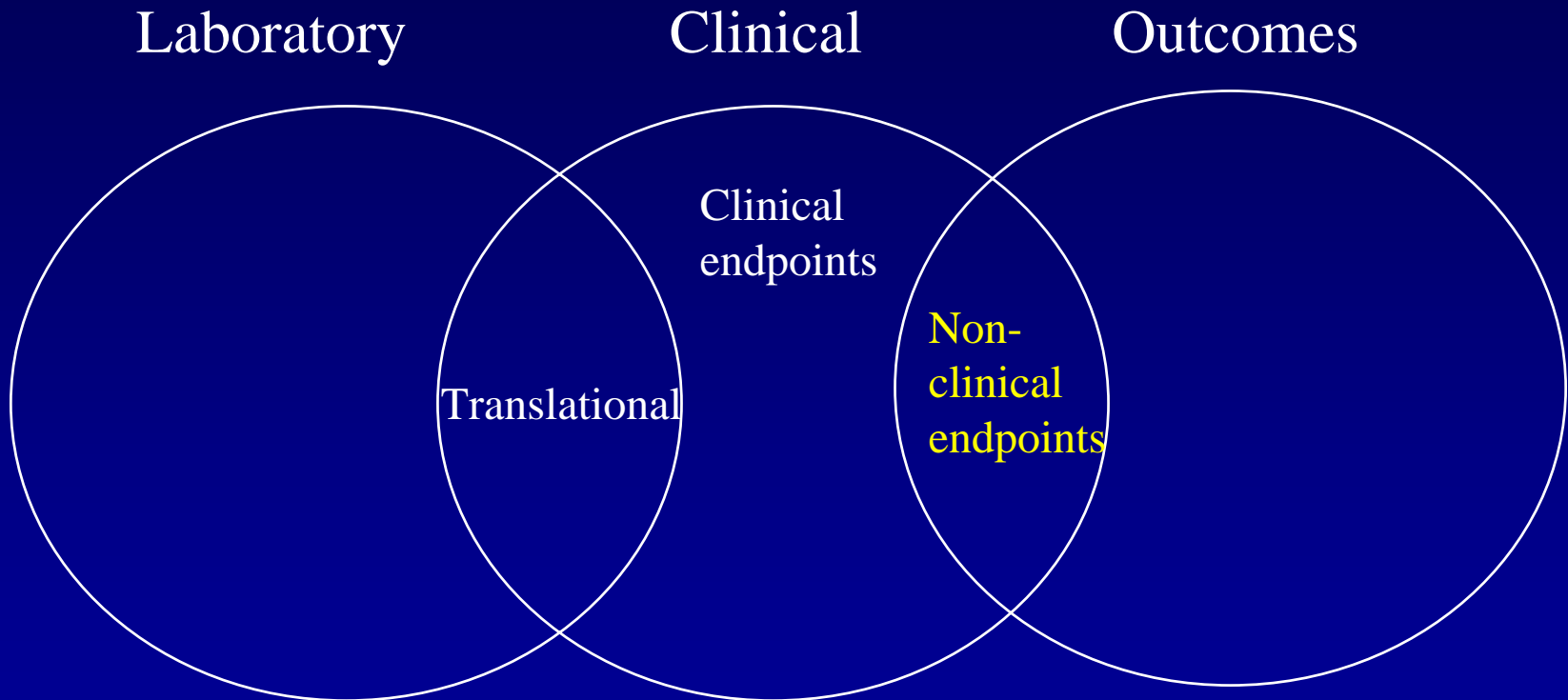


Strategies for getting your outcomes research funded

John D. Birkmeyer, MD
University of Michigan

What is outcomes research?



Really small things → Patients → Populations

Questions for outcomes researchers

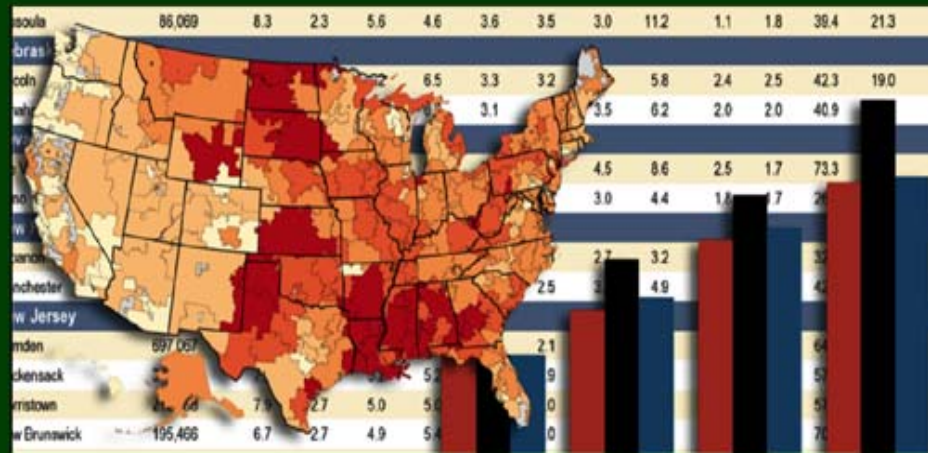
- Under-use and over-use of surgery
- Diffusion of surgical technology in era of mounting financial constraints
- Disparities in outcomes
- Variation in quality across hospitals and surgeons

Overview of my talk

- What is outcomes research?
- How I became the volume-outcome guy
- Lessons learned the hard way

The Quality of Medical Care in the United States:

A Report on the Medicare Program



The Center for the Evaluative Clinical Sciences
Dartmouth Medical School

The Dartmouth Atlas of Health Care 1999

Variation in Surgery

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graph TD; A[Variation in Surgery] --> B[Utilization]; A --> C[Outcomes]; A --> D[Practice style];
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Utilization

Outcomes

Practice style

Surgical outcomes research

Effect of hospital volume on in-hospital mortality with pancreaticoduodenectomy

John D. Birkmeyer, MD, Samuel R. G. Finlayson, MD, MPH, Anna N. A. Tosteson, ScD, Sandra M. Sharp, MS, Andrew L. Warshaw, MD, and Elliott S. Fisher, MD, MPH, Hanover, NH, White River Junction, Vt, and Boston, Mass

Background. Reports of better results at national referral centers than at low-volume community hospitals have prompted calls for regionalizing pancreaticoduodenectomy (the Whipple procedure). We examined the relationship between hospital volume and mortality with this procedure across all US hospitals. **Methods.** Using information from the Medicare claims database, we performed a national cohort study of 7229 Medicare patients more than 65 years old undergoing pancreaticoduodenectomy between 1992 and 1995. We divided the study population into approximate quartiles according to the hospital's aver-

Relationship between hospital volume and late survival after pancreaticoduodenectomy

John D. Birkmeyer, MD, Andrew L. Warshaw, MD, Samuel R. G. Finlayson, MD, MPH, Anna N. A. Tosteson, ScD, Hanover, NH, White River Junction, Vt, and Boston, Mass

Background. Several studies have reported lower perioperative mortality rates with pancreaticoduodenectomy at high-volume hospitals than at low-volume hospitals. We sought to determine also related to survival after hospital discharge.

Methods. Using information from the Medicare claims database, we performed a study of all 7229 patients over age 65 undergoing pancreaticoduodenectomy in the United States between 1992 and 1995. We divided the study population into approximate quartiles according to the hospital's average annual volume of pancreaticoduodenectomies in Medicare patients.

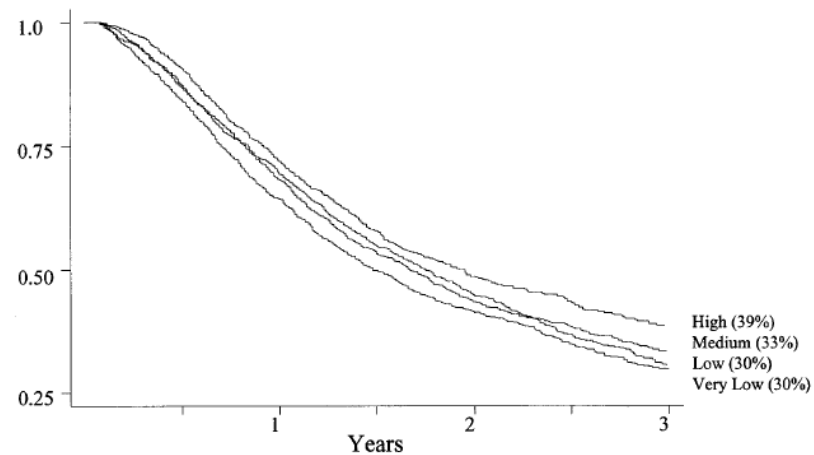


Fig 2. Survival in US Medicare patients discharged alive after pancreaticoduodenectomy, according to hospital volume.

Two overarching research questions

- How much does procedure volume really matter for different procedures?
- What would happen if volume were used a policy lever?

1996 — ~~X~~ ~~X~~ ~~X~~ ~~X~~ ~~X~~ —————> 2006

On the brink of private practice

- American Surgical Association (\$30K)—rejected
- American College of Surgeons (\$30K)—rejected
- VA Health Services Research & Development
 - Version 1 (1997)—lost, then rejected
 - Version 2 (1998)—OK score, not funded
 - Version 3 (1999)—worse score, not funded

1996

X X

2006

Better luck with funding

- VA Career Development Award
- Agency for Healthcare Research & Quality
R01 grant

Special Article

HOSPITAL VOLUME AND SURGICAL MORTALITY IN THE UNITED STATES

JOHN D. BIRKMEYER, M.D., ANDREA E. SIEWERS, M.P.H., EMILY V.A. FINLAYSON, M.D., THERESE A. STUKEL, Ph.D.,
F. LEE LUCAS, Ph.D., IDA BATISTA, B.A., H. GILBERT WELCH, M.D., M.P.H., AND DAVID E. WENNBERG, M.D., M.P.H.

ABSTRACT

Background Although numerous studies suggest that there is an inverse relation between hospital volume of surgical procedures and surgical mortality, the relative importance of hospital volume in various surgical procedures is disputed.



OVER the past three decades, numerous studies have described higher rates of op-

The NEW ENGLAND JOURNAL of MEDICINE

SPECIAL ARTICLE

Surgeon Volume and Operative Mortality
in the United States

John D. Birkmeyer, M.D., Therese A. Stukel, Ph.D., Andrea E. Siewers, M.P.H.,
Philip P. Goodney, M.D., David E. Wennberg, M.D., M.P.H.,
and F. Lee Lucas, Ph.D.

1996

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2006

More luck with funding

- CMS contract for “white paper”
- AHRQ grant to study effects on minority populations
- AHRQ R03 grant for national survey

Will Volume-Based Referral Strategies Reduce Costs Or Save Lives?

Although these strategies are promising, policymakers must keep an eye out for adverse market effects and new costs to the health system.

by John D. Birkmeyer, Jonathan S. Skinner, and David E. Wenn

ABSTRACT: Although recent policy initiatives aimed at concentrating selected procedures in high-volume hospitals may reduce mortality, their economic implications have not been considered fully. From the hospital perspective, the primary effect of these policies will be to redistribute surgical profits to bigger centers. From the payer perspective, prices paid for procedures will likely increase in some geographic areas. From

Hospital Volume, Length of Stay, and Readmission Rates in High-Risk Surgery

Philip P. Goodney, MD,*†; Theresa A. Stukel, PhD,‡; F. Lee Lucas, PhD,§; Emily P.A. Finkelstein, MD, MS,*¶ and John D. Birkmeyer, MD*†

Objective: Aimed at reducing surgical deaths, several recent initiatives have attempted to establish volume-based referral strategies in high-risk surgery. Although payers are leading the most visible of

these of
reduce r
Method
results

replacements). However, volume was not related to 30-day readmission rate with any procedure.

Conclusion: Although hospital volume may be an important predictor of some surgical deaths, it is not associated with readmission rates

Regionalization of High-Risk Surgery and Implications for Patient Travel

John D. Birkmeyer, MD

Andrea E. Siewers, MPH

Nancy J. Marth, MS

David C. Goodman, MD, MS

FOR MANY SURGICAL PROCEDURES, operative mortality rates are substantially lower at hospitals that perform them more frequently.¹⁻³ As a result, concentrating se-

Context: Given the strong volume-outcome relationship for many surgical procedures, restricting some procedures to high-volume standard is advocated. However, substantial travel burdens for surgical patients may be a result.

Objective: To estimate how minimum volume requirements for esophagectomy would affect how long patients would travel to receive care.

Design, Setting, and Patients: Simulated travel distances were calculated using road network data. All US hospitals in the 1990s that performed their surgical procedures included esophagectomy. Medicare patients (N=15796) undergoing esophagectomy between 1997 and 1999 were used.

Surgical outcomes research

Potential benefits of the new Leapfrog standards: Effect of process and outcomes measures

John D. Birkmeyer, MD, and Justin B. Dimick, MD, Ann Arbor, Mich, and White River Junction, Vt

Objective: The Leapfrog Group standards for evidence-based hospital referral underwent significant revision in 2003. In addition to other changes, risk-adjusted mortality and process of care measures now augment or replace volume standards for some procedures. The objective of this study was to estimate the

SURGERY

Volume 135 Number 6

JUNE 2004

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Volume to other things

- NCI R01 grant: Volume, process, and outcomes in cancer surgery
- NIA R21 grant on “integrative” performance measures
- BCBS-funded, surgical outcomes registries in cardiac, general, and vascular surgery

Overview of my talk

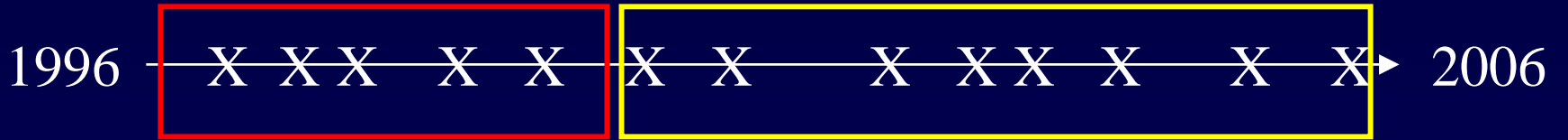
- What is outcomes research?
- How I became the volume-outcome guy
- Lessons learned the hard way

1. Crappy grants don't get funded

A critical re-assessment of my earliest grants

- Superficial, poorly written—clear I hadn't done this before
- Unsophisticated analytical methods
- Ill-advised choice of co-investigators/mentors
 - Famous senior faculty who didn't help me
 - Junior faculty without the track record
 - No one in-between

2. Policy context and
timing are important



Not funded

Funded

THE LEAPFROG GROUP
for **Patient Safety**
Rewarding **Higher Standards**

3. Think bigger than your
favorite operation

Health care



Surgery



Specialty (e.g.,
general surgery)



Subspecialty
(e.g., colorectal)



Disease focus
(e.g., IBD)



Research
leverage

Our clinical
practice



4. Choose the right funding
agency

Funding options for outcomes researchers

Good targets

- NIH
 - NCI, NIA
- Agency for Healthcare Research & Quality (AHRQ)
- Private foundations
 - Amer Heart, Amer Cancer Society, RWJ
- Payers
 - CMS
 - Private payers

Poor targets

- Industry
 - Outcomes researchers don't help get devices to market
- VA
 - Primarily interested in HSR with direct impact on veterans, primary care >> surgery
- Surgical organizations (e.g., SUS, ACS, ASA)
 - Reviewers mainly mice & millimole types

5. Grants are just the means to
the end

Big Picture

- Externally funding is obviously important
 - To you: prestige, promotion, etc
 - To your boss: Salary support, indirects, etc
 - To your work: good research takes \$\$
- But real measure is the impact of your work on patients, practice, and policy
 - Ask big questions, answer them clearly, and disseminate your message broadly