



Robert Probe MD
President, Orthopaedic Trauma Association
Scott & White Healthcare
Texas A&M College of Medicine

THE CHANGING VALUE PROPOSITION OF THE ORTHOPAEDIC TRAUMATOLOGIST



Healthcare

Orthopaedic
Trauma



Nov^{Dec} 1984 - REFERENCE
 name (PRIOR)

| | | |
|--------------------|---|-----------------------------------|
| Ken Johnson | } | Parkland Mem. Hosp., Dallas TX |
| Bob Bucholz | | |
| Bruce Browner | | UTMS Houston - Mermann Hosp. |
| TOM COMFORT | | ST PAUL-RANSBY MC. |
| Keith Mago | | Harborview |
| Chuck Edwards | | Univ. of Md. |
| Bob Bramback | | Univ. of Md. |
| Attila Poka | | Univ. of Md. |
| RAFAEL B. GUSTICO | | ACORC, OPLS |
| CHARLES F. SANZONE | | Boston City |
| W. C. FOSTER | | Med. College VA, Richmond |

ORTHOPAEDIC TRAUMA HOSPITAL ASSOCIATION
STUDY GROUP MEETING

OCTOBER--1982

1. Standard Classification of Fracture and Evaluation of Treatment Results
Ramon B. Gustilo, M.D.--Hennepin County Medical Center
Michael Chapman, M.D.--University of California
2. Pelvic Fracture
Renner Johnston, M.D.--Denver General Hospital
3. Acetabular Fracture
Thomas Comfort, M.D.--St. Paul-Ramsey Medical Center
4. Young Femoral Neck Fractures
Richard F. Kyle, M.D.--Hennepin County Medical Center
5. Immediate Fixation of Fracture in the Multiple Trauma Patient
Sigvard Hansen, M.D.--Harborview Medical Center
6. Spine Fracture
Taylor Smith, M.D.--University of Texas Health Center
Charles Edwards, M.D.--University of Maryland
Francis Denis, M.D.--St. Paul-Ramsey Medical Center
7. Pathologic Fracture
Edward Haberman, M.D.--Montefiore Hospital and Medical Center

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Prophylactic Antibiotics in Hip Fractures

A DOUBLE-BLIND, PROSPECTIVE STUDY*

BY J. W. BURNETT, M.D.[†], RAMON B. GUSTILO, M.D.[‡], DAVID N. WILLIAMS, M.D.[§], AND
ALLAN C. KIND, M.D.[§], MINNEAPOLIS, MINNESOTA

From the Department of Orthopaedic Surgery, Hennepin County Medical Center, Minneapolis

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9
8
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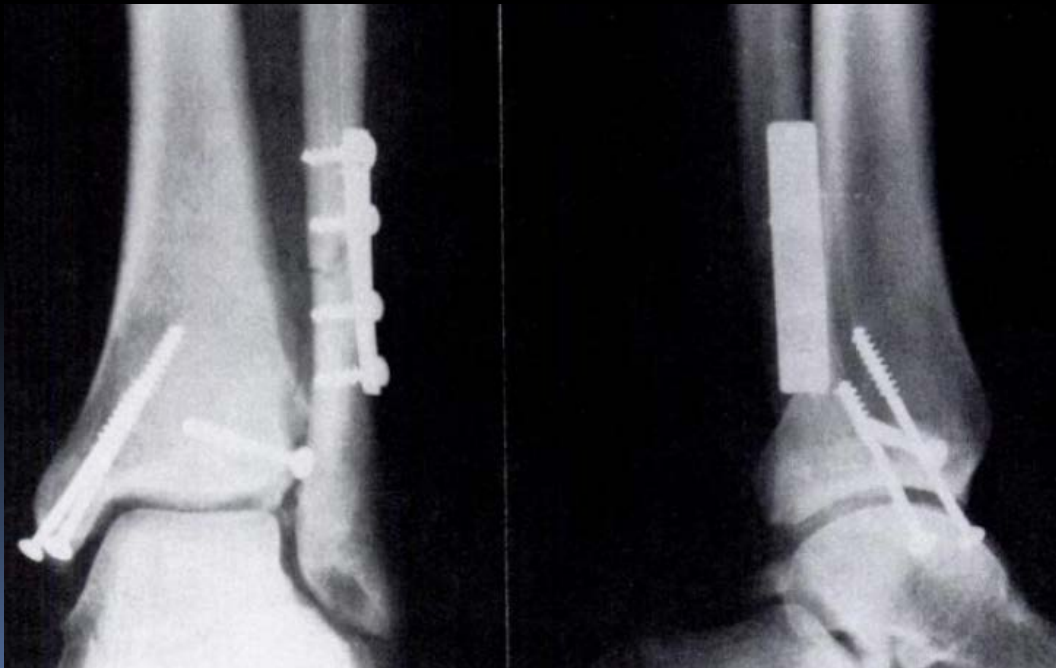
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Immediate Internal Fixation of Open Ankle Fractures

REPORT OF THIRTY-EIGHT CASES TREATED WITH A STANDARD PROTOCOL

BY JONATHAN L. FRANKLIN, M.D.*, KENNETH D. JOHNSON, M.D.†, AND SIGVARD T. HANSEN, JR., M.D.*,
SEATTLE, WASHINGTON

From the Harborview Medical Center, Seattle



1
9
8
4

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Treatment of Tibial Fractures by Reaming and Intramedullary Nailing*

BY LAWRENCE B. BONE, M.D.[†], AND KENNETH D. JOHNSON, M.D.[†], DALLAS, TEXAS

From the University of Texas Health Science Center at Dallas, Dallas



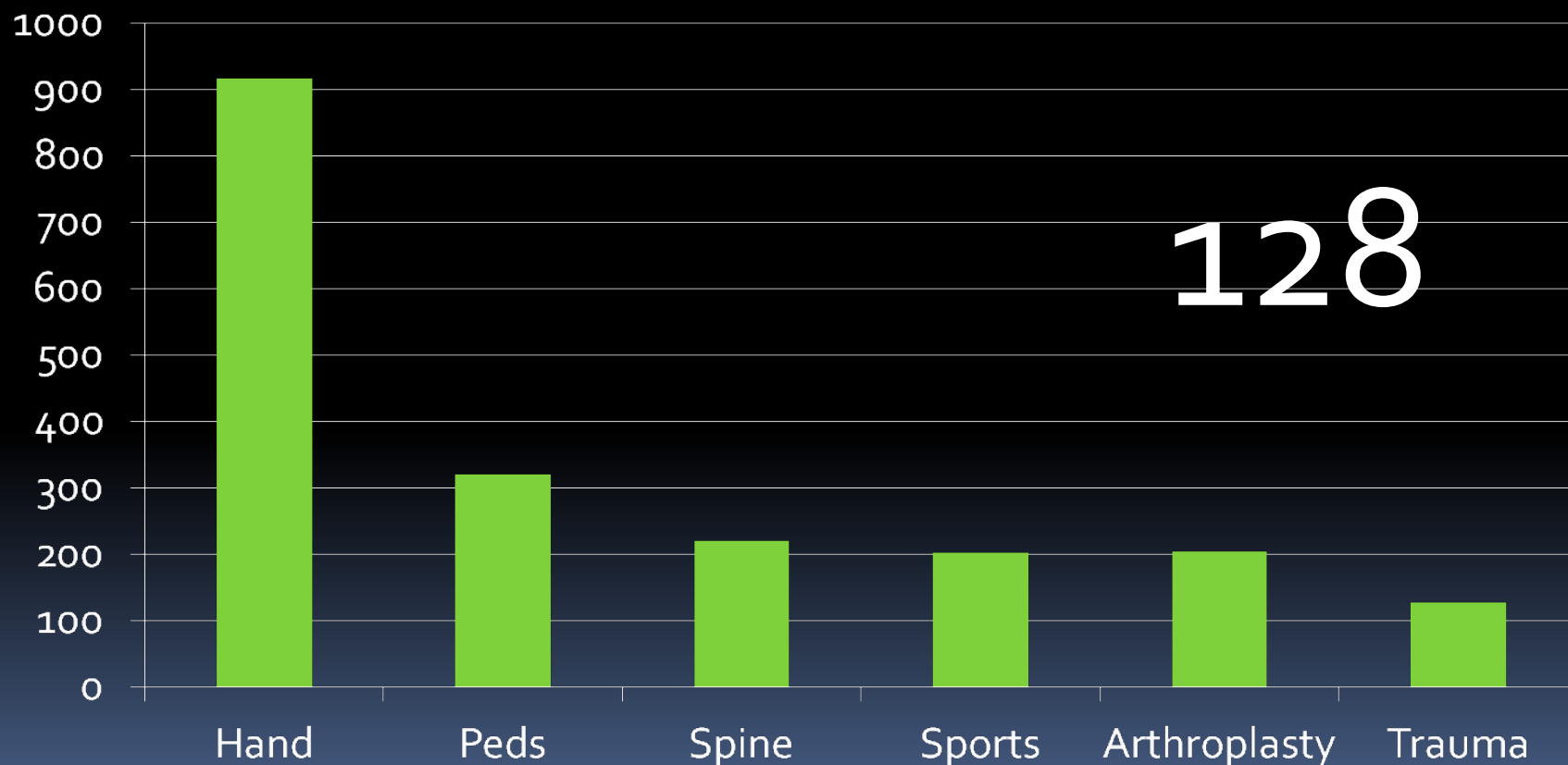
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7





AAOS 1986 Census: Members with Fellowships

Discipline



OTHA Executive Committee Meeting

St. Regis Hotel

September 13, 1985

Change of Name: Dr. Chapman proposed changing the name of the organization from Orthopedic Trauma Hospital Association to Orthopedic Trauma Association. After some discussion, this was unanimously accepted by the Board.

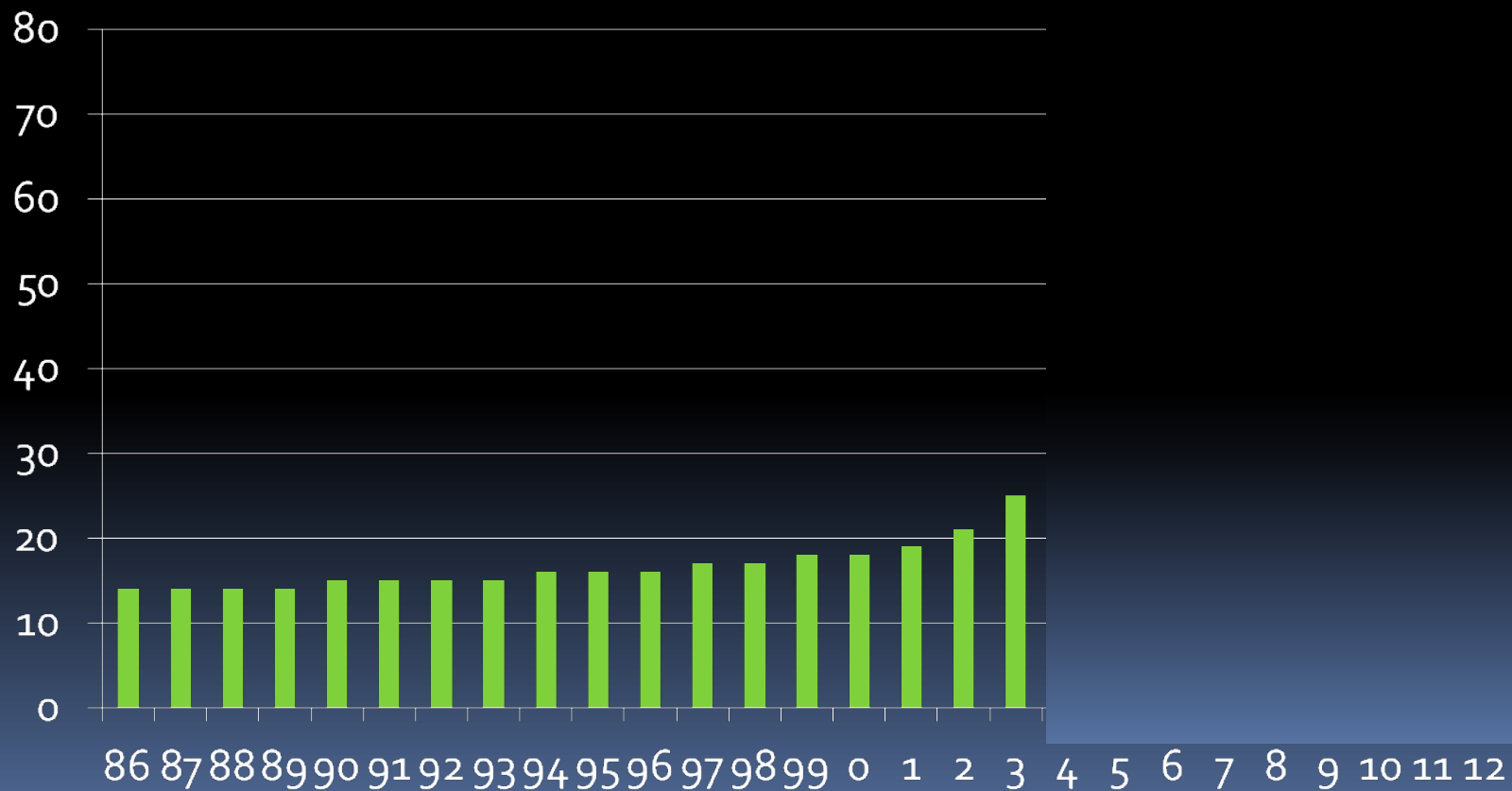
It is recommended that a new committee be established this coming year to study the possible standardization and accreditation of fellowships. In addition this committee may want to look at the future of certificates of added qualification.





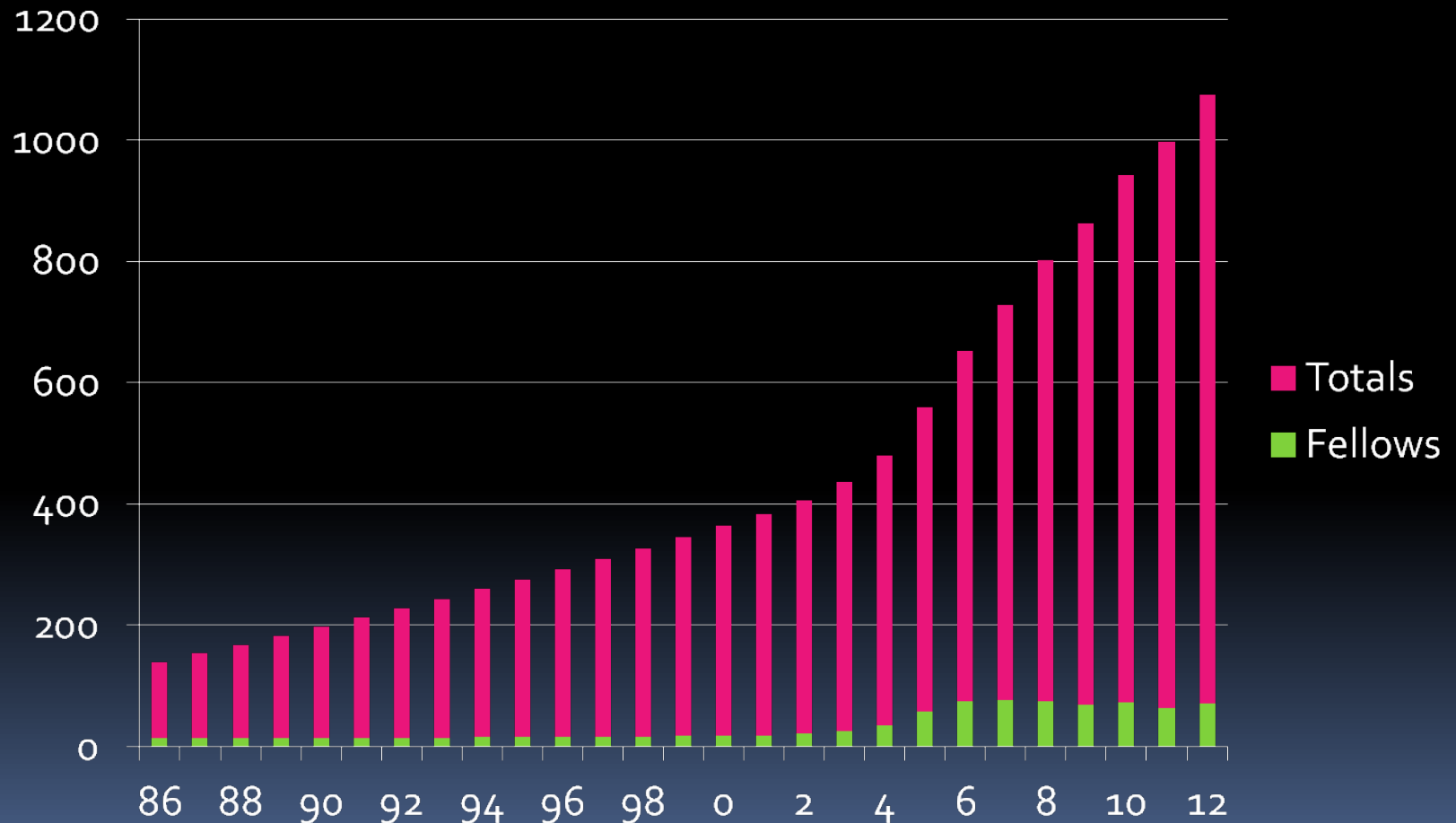
Orthopaedic Trauma Fellowship Growth

Fellows

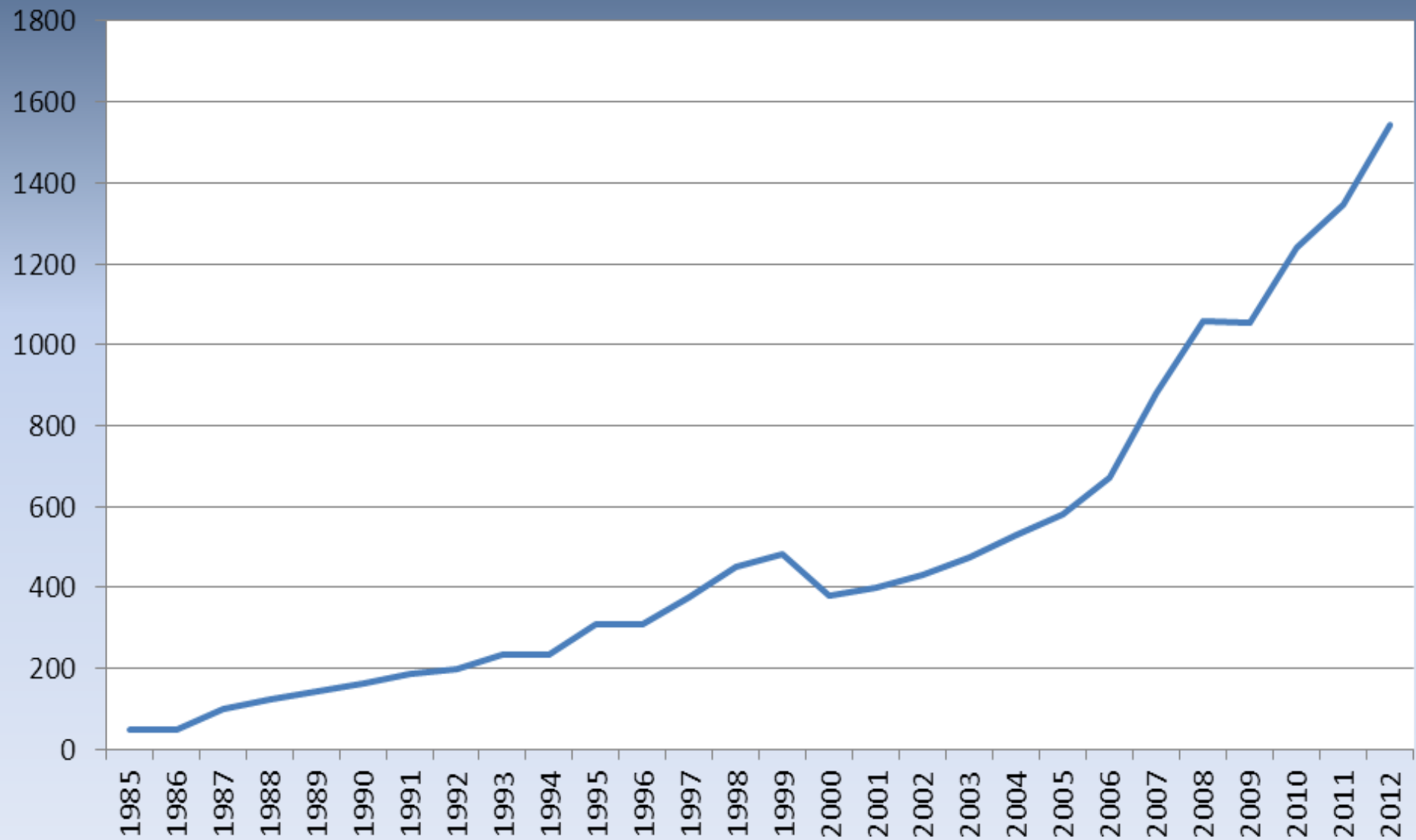




Cumulative Orthopaedic Trauma Fellow Count

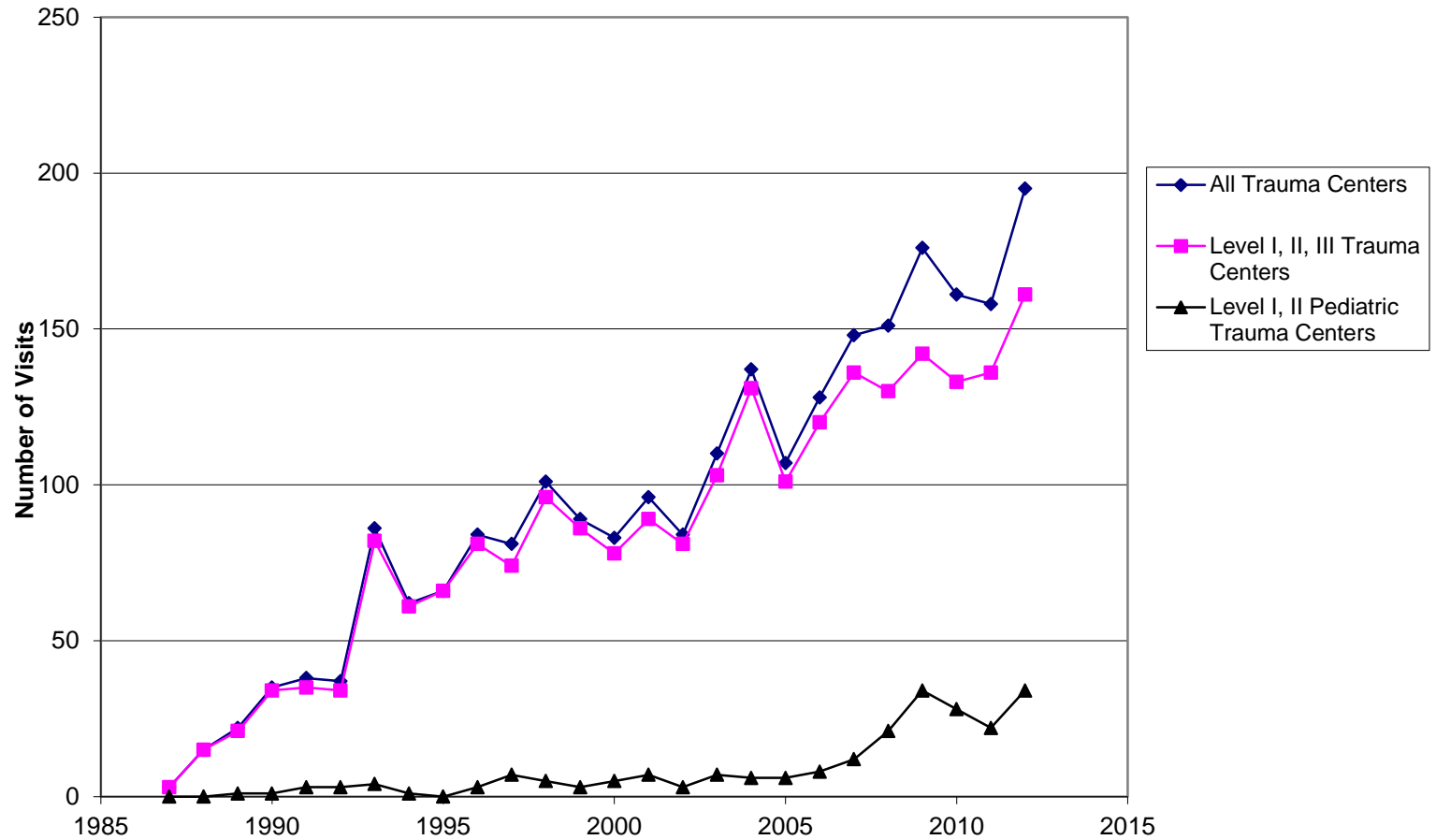


OTA Membership Growth





ACS Verification Visits 1987-2012 (Including consults and on-site focused visits)



2012 tentative visits scheduled and those pending as of 08/15/2012

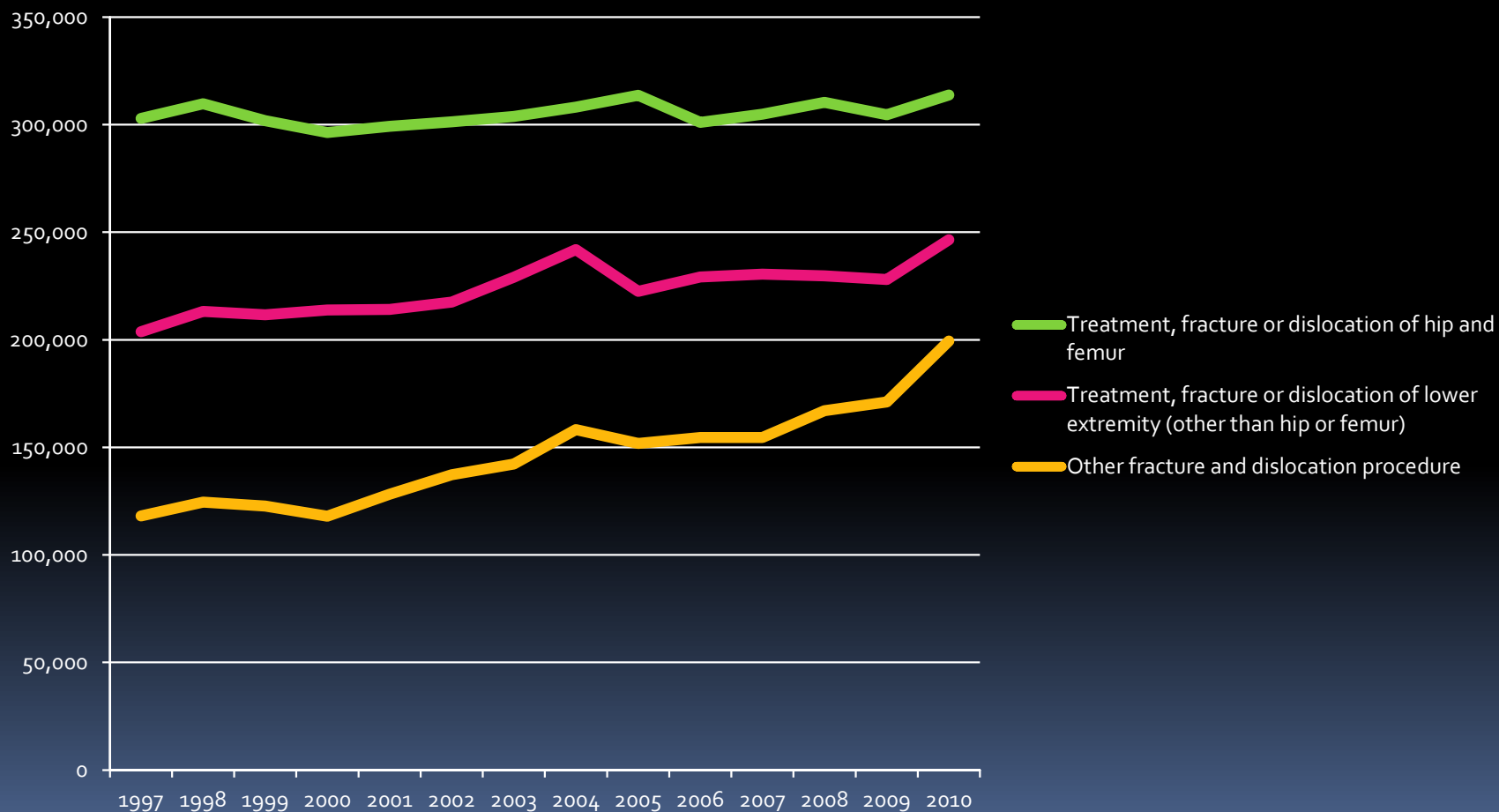


AMERICAN COLLEGE OF SURGEONS

Inspiring Quality:
Highest Standards, Better Outcomes



Agency Healthcare Research & Quality





Mission Accomplished!

What's Next ?



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Safety

Quality

Cost



Safety

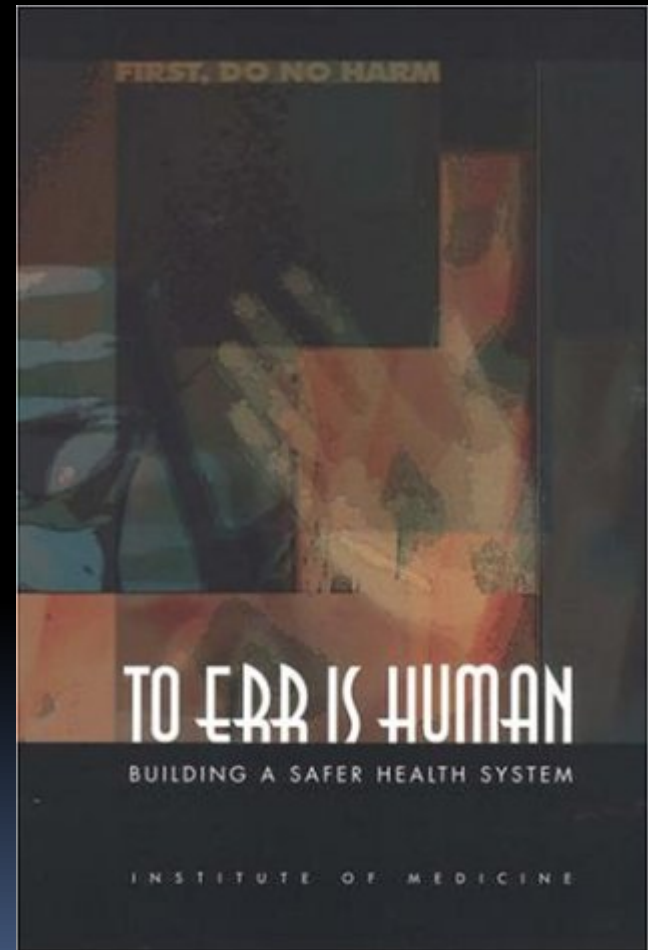
Quality

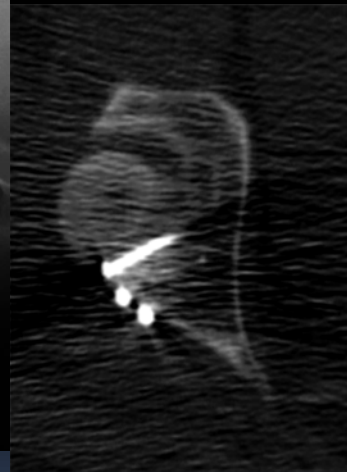
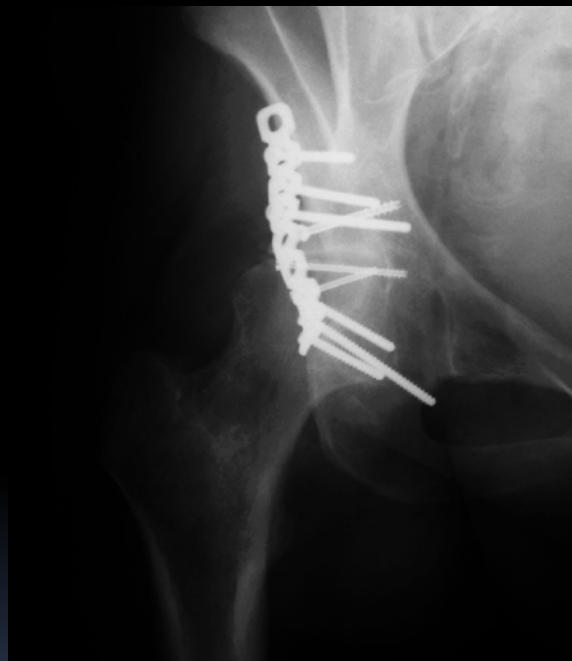
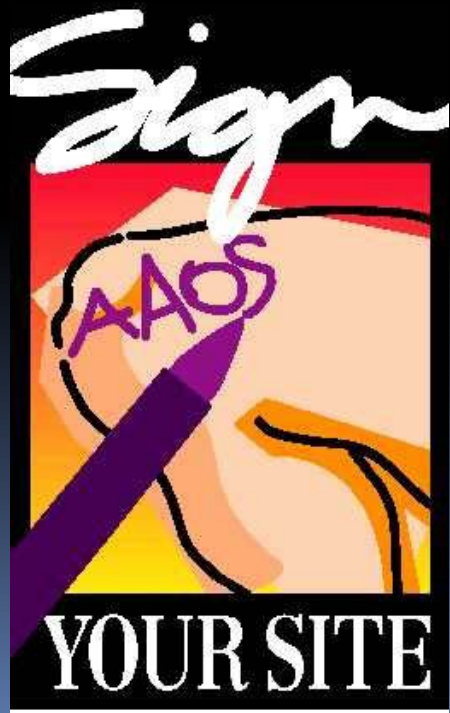
Cost





100,000
Preventable
Deaths in US
Hospitals







Wall Street Journal: 9/23/2012

AT&T 3G 11:10 PM 100%

REVIEW

Welcome, R Probe Updating... ***



How to Stop Hospitals From Killing Us

When Surgeons Leave Objects Behind

Medical errors kill enough to fill four jumbo jets : by ANAHAD O'CONNOR, well.blogs.nytimes.com
A surgeon with five sim to make health care. September 24th 2012

TAP FOR STORY

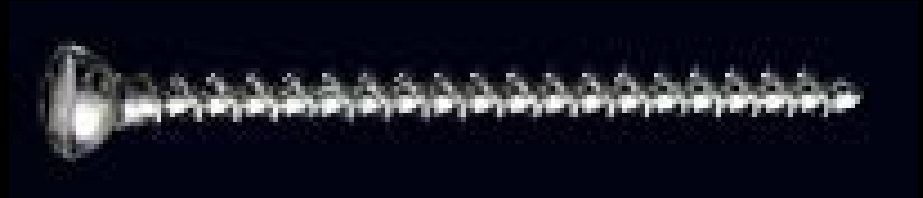
SWIP

Save | Edition | ⓘ | ☰

New York Times 9/24/2012



Safety



Quality



Cost

Login Here

Own the Bone subscribers login here.

e-mail address

password

☐ Remember my login

Login

[Forgot user ID?](#) [Forgot password?](#)



PREVENTION

Studies show many people do not get enough vitamin D to maintain strong bones. Addressing deficiencies can prevent secondary fractures. Have you informed your patients about the importance of calcium and vitamin D intake?

It's time to Own the Bone.

ARTICLE

PROGRESS

Deficiency

Dr. [Name], M.D., Ph.D.

ORIGINAL ARTICLE

Denosumab for Prevention of Fractures in Postmenopausal Women with Osteoporosis

Steven R. Cummings, M.D., Javier San Martin, M.D., Michael R. McClung, M.D., Ethel S. Siris, M.D., Richard Eastell, M.D., Ian R. Reid, M.D., Pierre Delmas, M.D., Ph.D., Holly B. Zoog, Ph.D., Matt Austin, M.S., Andrea Wang, M.A., Stepan Kutilek, M.D., Silvano Adami, M.D., Ph.D., Jose Zanchetta, M.D., Cesar Libanati, M.D., Suresh Siddhanti, Ph.D., and Claus Christiansen, M.D., for the FREEDOM Trial*



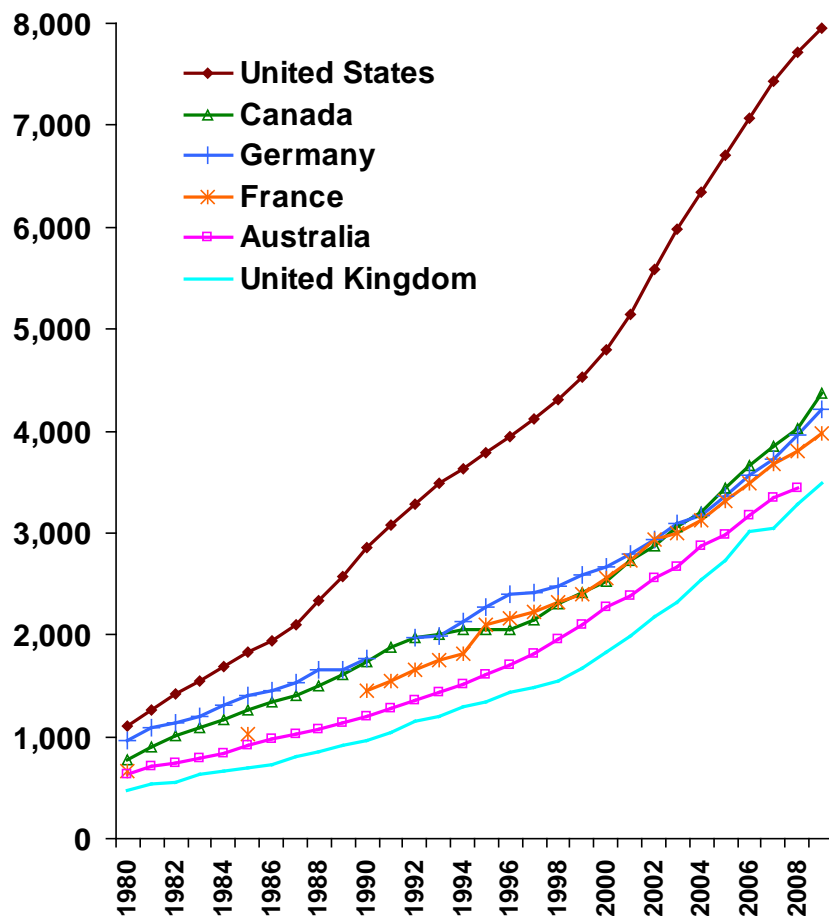
Safety

Quality

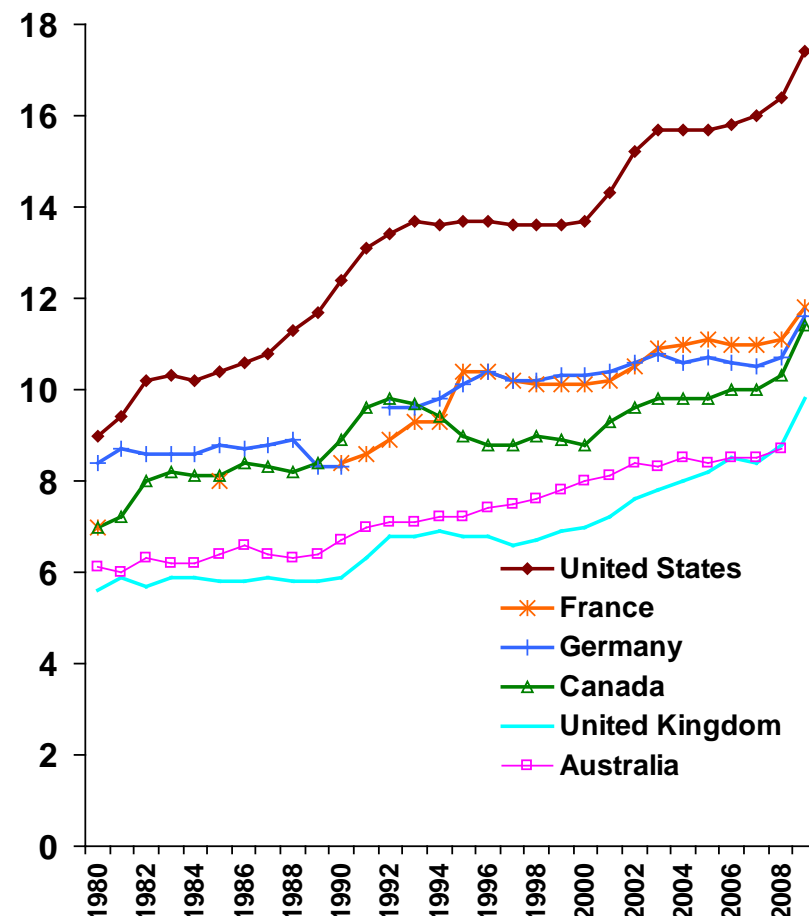
Cost

International Comparison of Spending on Health, 1980–2009

Average spending on health per capita (\$US PPP*)



Total expenditures on health as percent of GDP



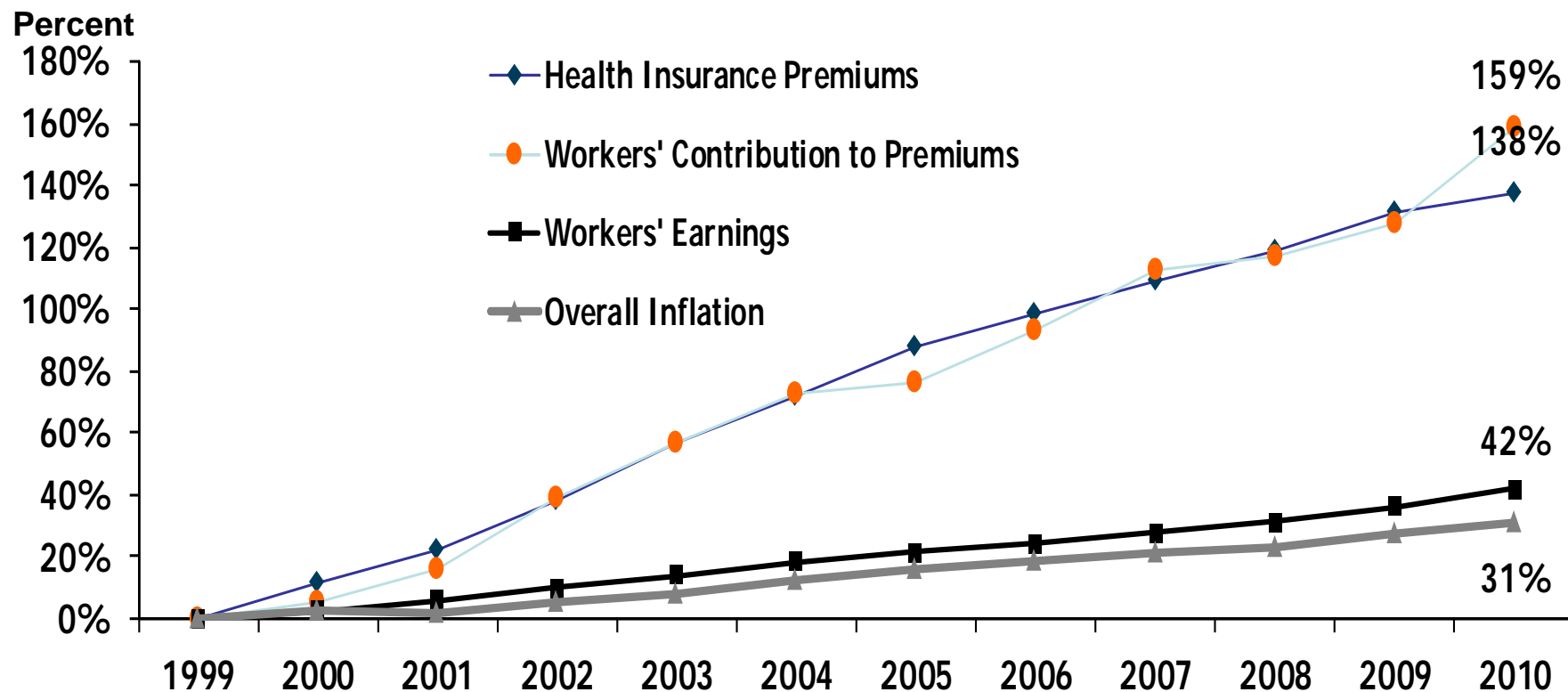
* PPP=Purchasing Power Parity.

Data: OECD Health Data 2011 (database), version 6/2011.





Increases in Health Insurance Premiums Compared with Other Indicators, 1999–2010



Data: Kaiser/HRET Survey of Employer-Sponsored Health Benefits, 1999–2010. Bureau of Labor Statistics, Consumer Price Index, U.S. City Average of Annual Inflation (April to April), 1999–2010; Bureau of Labor Statistics, Seasonally Adjusted Data from the Current Employment Statistics Survey, 1999–2010 (April to April).

National Debt

U.S. NATIONAL DEBT CLOCK

The Outstanding Public Debt as of 01 Oct 2012 at 06:46:44 PM GMT is:

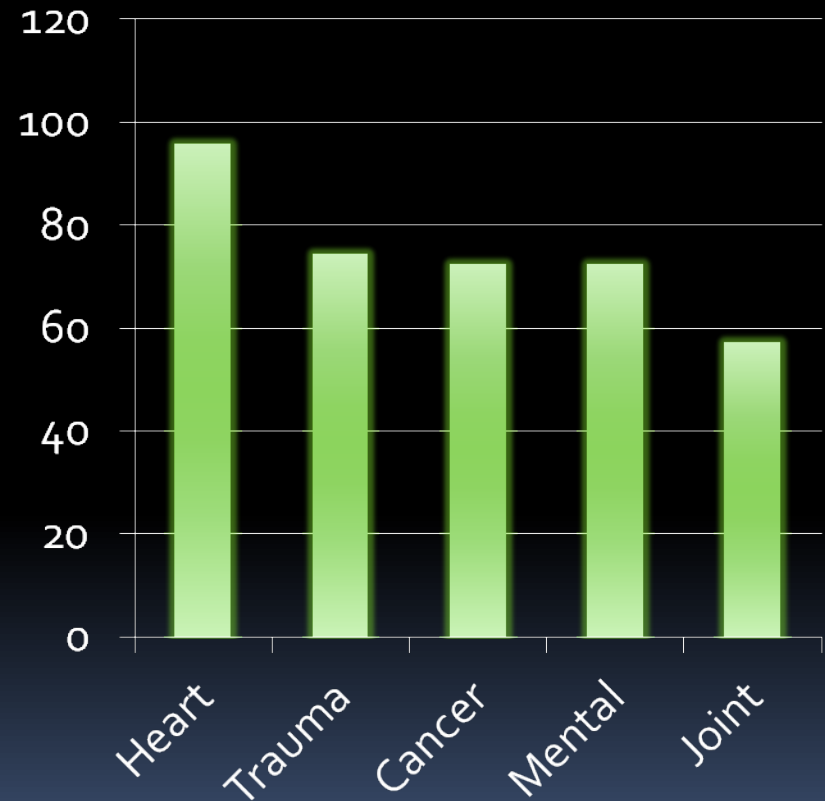
\$16,029,966,411,348.18

The estimated population of the United States is **313,606,343**
so each citizen's share of this debt is **\$51,114.93**.

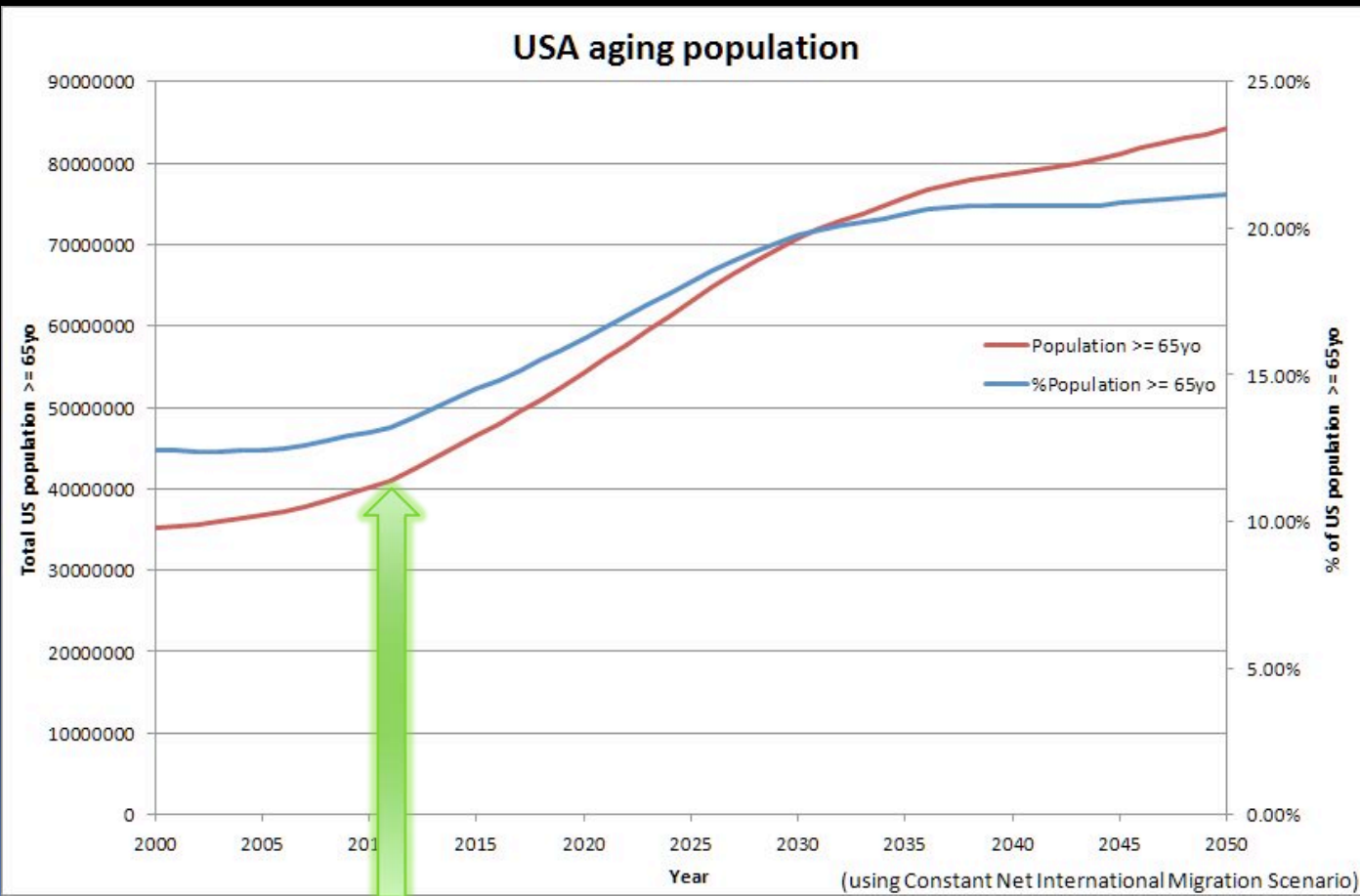
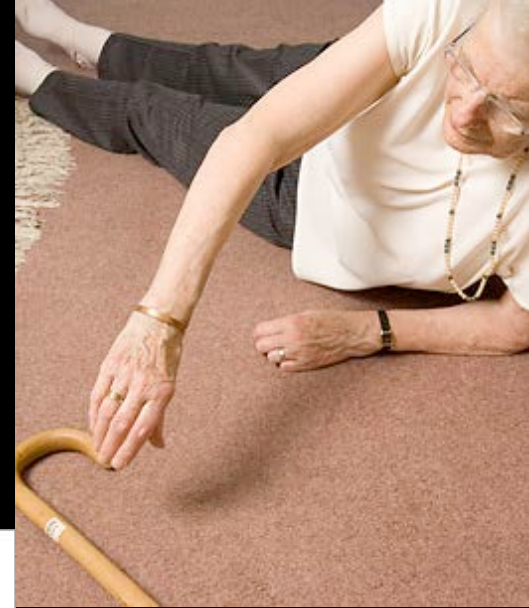
Orthopaedics Trauma Cost

- 1,000,000 Annual admissions for fractures
- \$35,000 charges per admission

Top 5 Costliest



Demographics

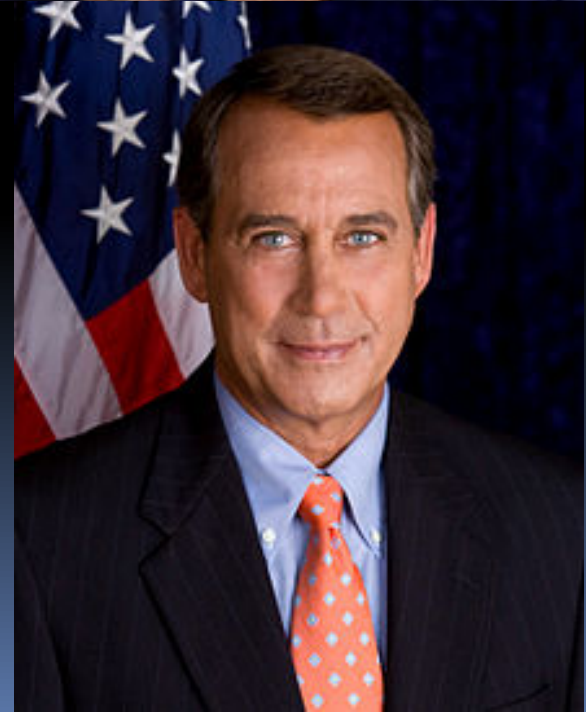


The unseen cost of fracture care

- Time lost from work
- Permanent Impairment









Safety

Quality

Cost





Does the SURGEON always participate effectively and to your satisfaction in the time out procedure before initiation of the operation?

No



Yes



Surgeon

Baseline

Follow up

60 40 20 0 20 40 60 80 100

Percent (%)

Not Significant





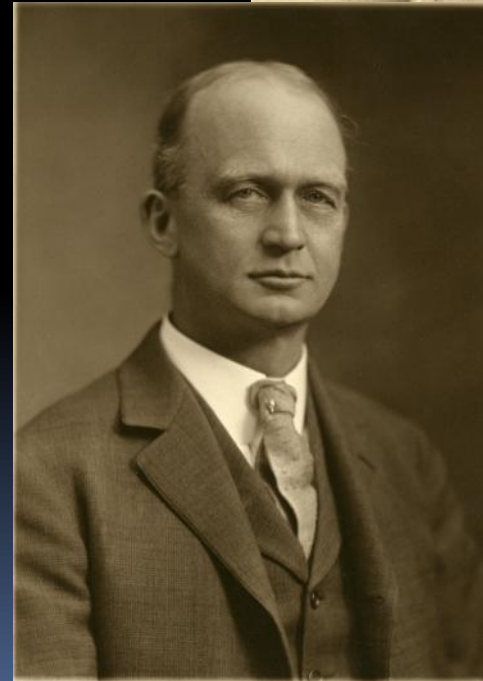
Safety

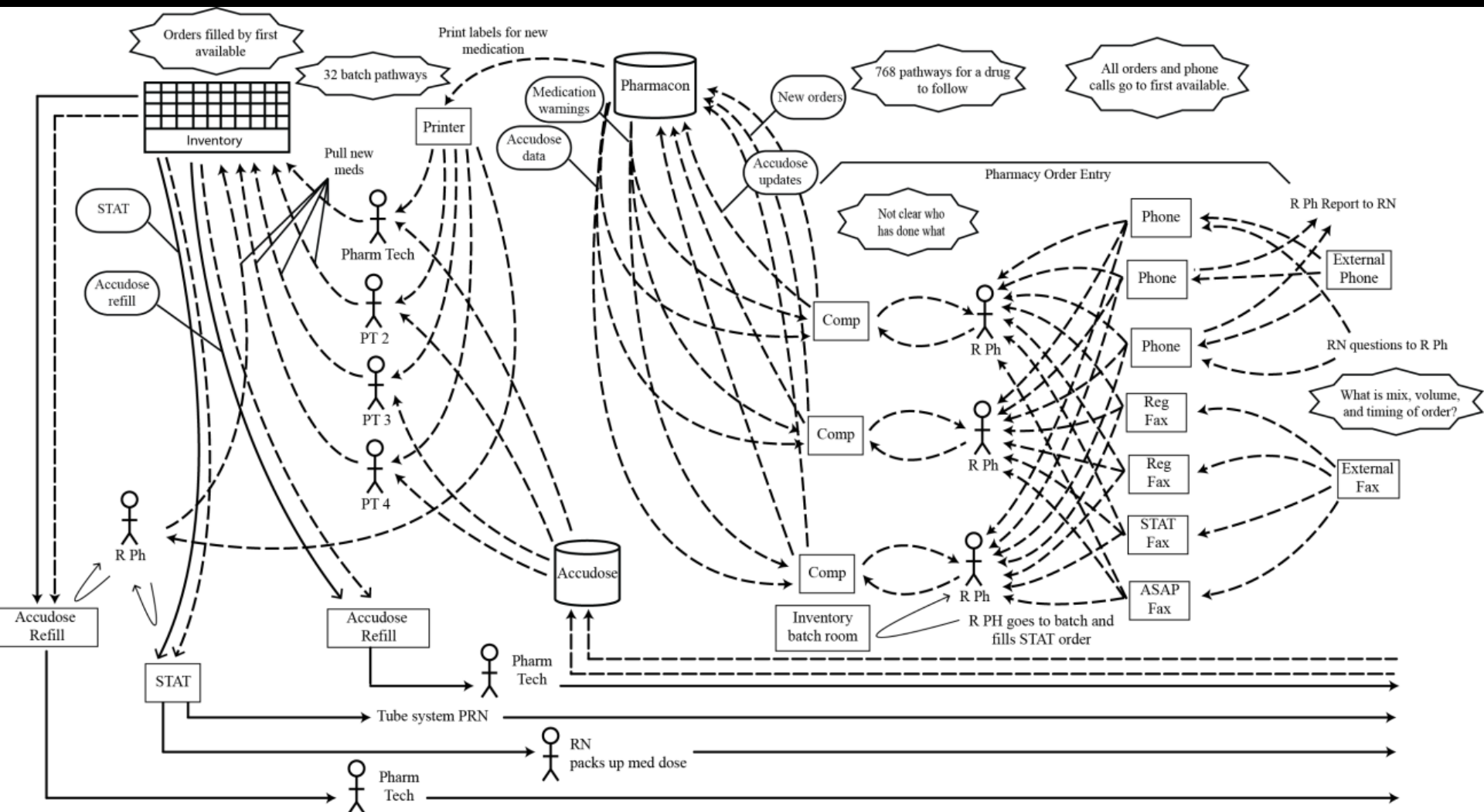
Quality

Cost

Ernest Codman

- “end result card”
- 1914 had his plan for surgeon competence refused
- 1911-1916:
 - ▣ 337 discharged patients
 - ▣ 123 errors
- End result hospital







100 YEARS OF INSPIRING QUALITY



AMERICAN COLLEGE OF SURGEONS

*Inspiring Quality:
Highest Standards, Better Outcomes*

100years

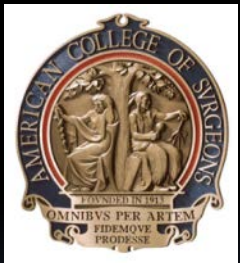


Minimum Standard
for Hospitals

1917

2004

2011



ACS NSQIP: Data Matters

ORIGINAL ARTICLES

Does Surgical Quality Improve in the American College of Surgeons National Surgical Quality Improvement Program An Evaluation of All Participating Hospitals

Bruce L. Hall, MD, PhD, MBA, FACS,*†‡§ Barton H. Hamilton, PhD,§ Karen Richards, BS,¶
Karl Y. Bilimoria, MD, MS,|| Mark E. Cohen, PhD,¶ and Clifford Y. Ko, MD, MS, MSHS, FACS**†¶

Background/Objective: The National Surgical Quality Improvement Program (NSQIP) has demonstrated quality improvement in the VA and pilot study of 14 academic institutions. The objective was to show that American College of Surgeons (ACS)-NSQIP helps all enrolled hospitals.

Methods: ACS-NSQIP data was used to evaluate improvement in hospitals longitudinally over 3 years (2005-2007). Improvement was defined as reduction in risk-adjusted "Observed/Expected" (O/E) ratios between periods with risk adjustment held constant. Multivariable logistic regression-based adjustment was performed and included indicators for procedure groups. Additionally, morbidity counts were modeled using a negative binomial model, to estimate the number of avoided complications.

Results: Multiple perspectives reflected improvement over time. In the analysis of 118 hospitals (2006-2007), 66% of hospitals improved risk-adjusted mortality (mean O/E improvement: 0.174; $P < 0.05$) and 82% improved risk-adjusted complication rates (mean O/E improvement: 0.114; $P < 0.05$). Correlations between starting O/E and improvement (0.834 for mortality, 0.652 for morbidity), as well as relative risk, revealed that initially worse-performing hospitals had more likelihood of improvement. Nonetheless, well-performing hospitals also improved. Modeling morbidity counts, 183 hospitals (2007), avoided ~9598 potential complications: ~52/hospital. Due to sampling this may represent only 1 of 5 to 1 of 10 of the true total. Improvement reflected aggregate performance across all types of hospitals (academic/community, urban/rural). Changes in patient risk over time had important contributions to the effect.

Conclusions: ACS-NSQIP indicates that surgical outcomes improve across all participating hospitals in the private sector. Improvement is reflected for both poor- and well-performing facilities. NSQIP hospitals appear to be avoiding substantial numbers of complications—improving care, and reducing costs. Changes in risk over time merit further study.

(Ann Surg 2009;250: 000-000)

From the *Department of Surgery, John Cochran Veterans Affairs Medical Center, St. Louis, MO; †Washington University Center for Health Policy, St. Louis, MO; ‡Department of Surgery, Washington University in Saint Louis School of Medicine, St. Louis, MO; §Olin Business School at Washington University in St. Louis, St. Louis, MO; ¶Division of Research and Optimal Patient Care, American College of Surgeons, Chicago, IL; ‡Department of Surgery, Northwestern University School of Medicine, Chicago, IL; and **Department of Surgery, University of California Los Angeles School of Medicine, Los Angeles, CA.

Supported by the Center for Health Policy, Washington University in Saint Louis, Director William Rick, MD (w.r.rick@wustl.edu) and also by the American College of Surgeons Clinical Scholars in Leadership program (to K.Y.B.).

The ACS NSQIP and the hospitals participating in the ACS NSQIP are the source of the data used herein; they have not verified and are not responsible for the statistical validity of the data analysis or the conclusions derived by the authors.

This study does not represent the views or plans of the ACS or the ACS NSQIP. Reprints: Bruce L. Hall, MD, PhD, MBA, Campus Box 8109, 660 South Euclid Ave, St. Louis, MO 63110. E-mail: hallb@wustl.edu.

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ISSN: 0003-4932/09/2507-0001

DOI: 10.1097/SLA.0b013e318184148f

The National Surgical Quality Improvement Program (NSQIP) was developed in the 1990s in the Veterans Health Administration and led to marked improvement in surgical quality. Mortality and morbidity rates declined, patient satisfaction improved, and lengths of stay decreased.^{1,2} In 2001 to 2004, with funding from the Agency for Healthcare Research and Quality, a pilot study outside the VA, the Patient Safety in Surgery Study, was performed which demonstrated that NSQIP was feasible to implement in the private sector, and resulted in aggregate reduction of postoperative morbidity.³ The American College of Surgeons NSQIP (ACS-NSQIP) was subsequently opened to the private sector by subscription after 2004. The ACS-NSQIP collects data and reports risk-adjusted surgical outcomes. It is the only multispecialty, clinically based, prospectively collected, quality improvement (QI) program for the protection of surgery, and its utility has been shown over years of implementation. The program has grown in the private sector since inception, and continues to grow. It now includes >200 hospitals varying in size, location, and teaching status. The objective of this study was to show whether the ACS-NSQIP helps enrolled hospitals improve surgical quality over time.

METHODS

The NSQIP general approach to data collection and performance evaluation has been described previously.¹⁻⁸ In brief, the program has traditionally focused on general and vascular surgery (outside of the VA) although a multispecialty approach is now available. The program's strengths include reliance on clinical data (not administrative) abstracted from the medical record by a trained data expert. The program focuses on 30-day outcomes (whether or not a patient has been discharged from their initial admission) via direct ascertainment of the 30-day time point. Outcomes include 21 rigorously defined morbidities (including the following categories: wound, respiratory, urinary tract, central nervous system, cardiac, and 5 others), as well as mortality. Eligible cases include major general and vascular cases under general/spinal/epidural anesthesia, subject to eligibility and accrual limits. Cases are sampled in a systematic, temporal fashion. A critical feature of the program has been that data collection is coordinated by a dedicated full time nurse or trained health information expert, who is specifically trained in NSQIP methods and data field definitions, who is regularly audited, and who maintains a degree of separation from individual surgeons. Specific materials describing the qualifications, training, and auditing of these personnel, as well as data definitions and data collection protocols, are available online from the ACS NSQIP website.⁹ A prominent aspect of the approach is regular assessment of interrater reliability. As a result of multiple reinforcing approaches, data integrity within the program has been excellent and consistently improving as well. For instance, interrater reliability audits revealed that in 2005 total disagreements across the program were at 3.15% (for nearly 40,000 audited fields), and by 2008 total disagreements were at 1.60% (>140,000 audited fields).

82%

OF HOSPITALS DECREASED
COMPLICATIONS

66%

OF HOSPITALS
DECREASED MORTALITY

250-500

COMPLICATIONS PREVENTED
ANNUALLY PER HOSPITAL

The Value of an Organized Fracture Program for the Elderly: Early Results

Stephen L. Kates, MD, Daniel A. Mendelson, MS, MD,† and Susan M. Friedman, MD, MPH†*

| | Readmission | Death | Complications |
|-----------|-------------|-------|---------------|
| Comanaged | 97 | 15 | 306 |
| Predicted | 194 | 32 | 1177 |

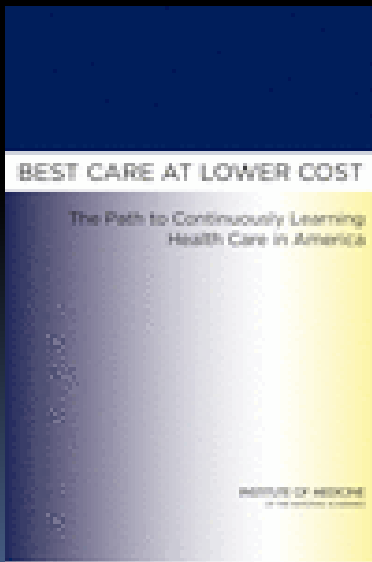




Safety

Quality

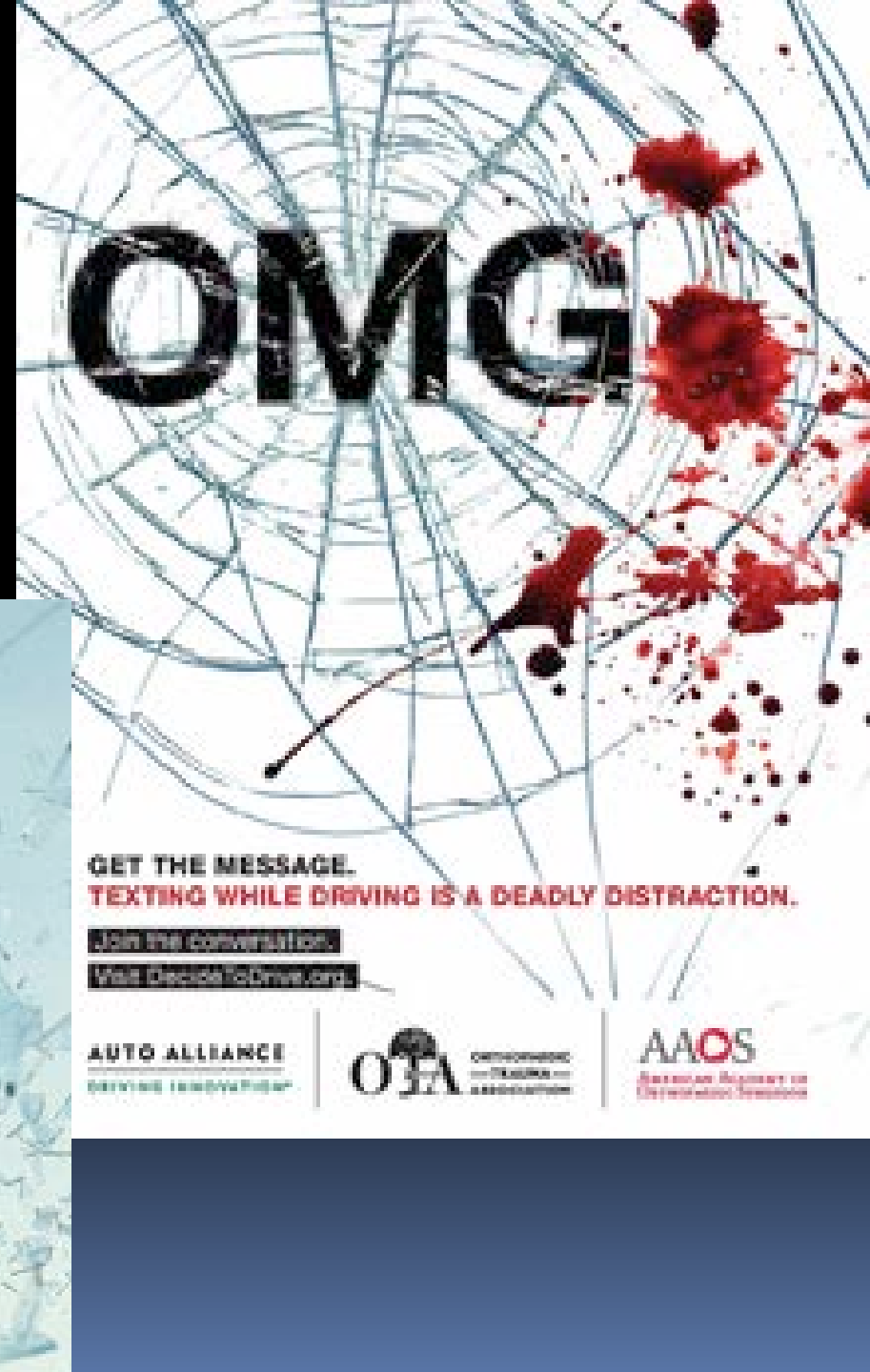
Cost



Disclosures

- Board of Trustees of Scott & White Healthcare
 - \$2.4 Billion Not for Profit Care Provider in Central Texas
 - 13 Hospitals
 - 1,300 Providers
 - 70 Clinics
- Consultant – Stryker Orthopaedics

Prevention





Declining US Traffic Fatalities





Physician

Diagnostic & Surgical
Skill

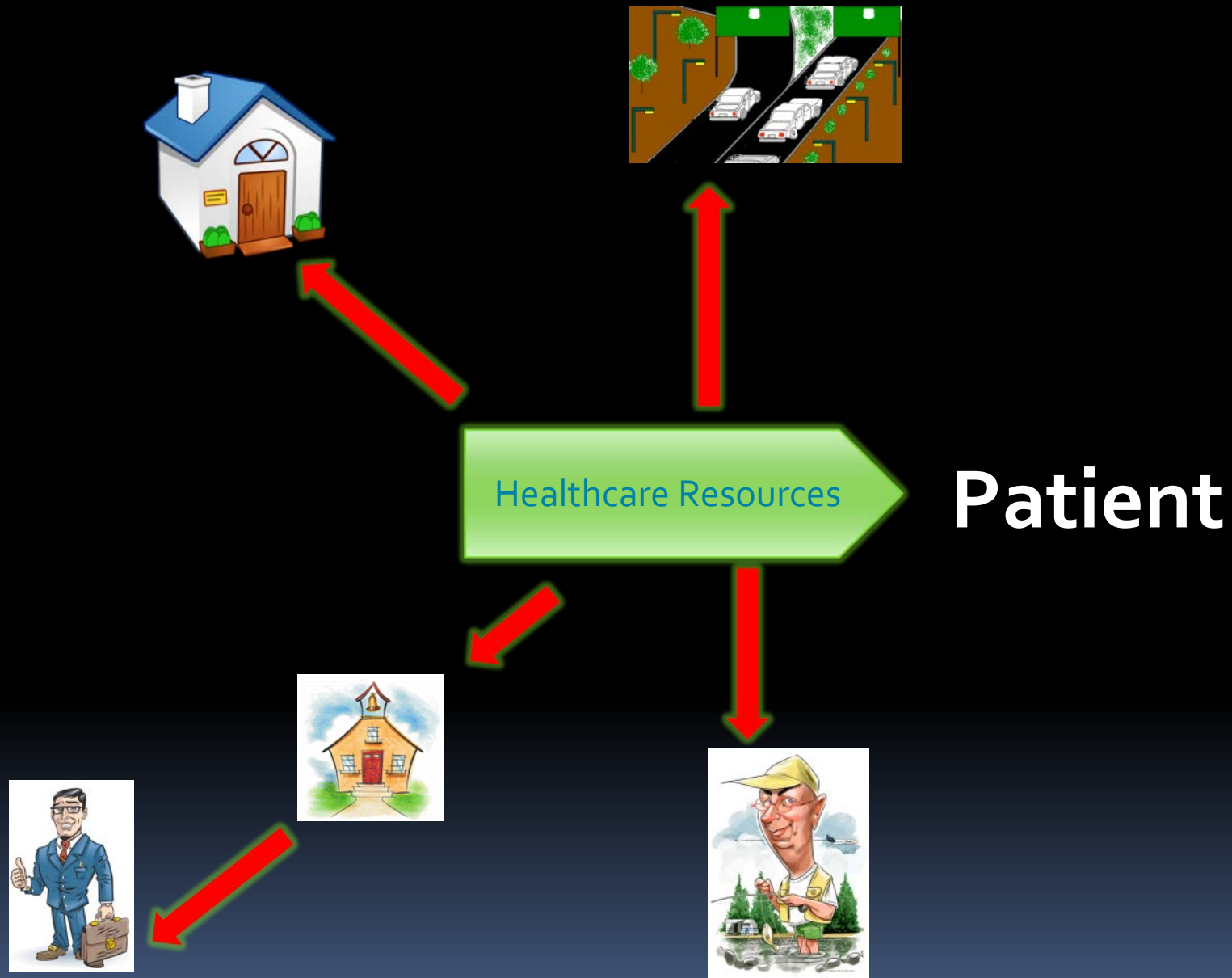
Healthcare Resources

Patient

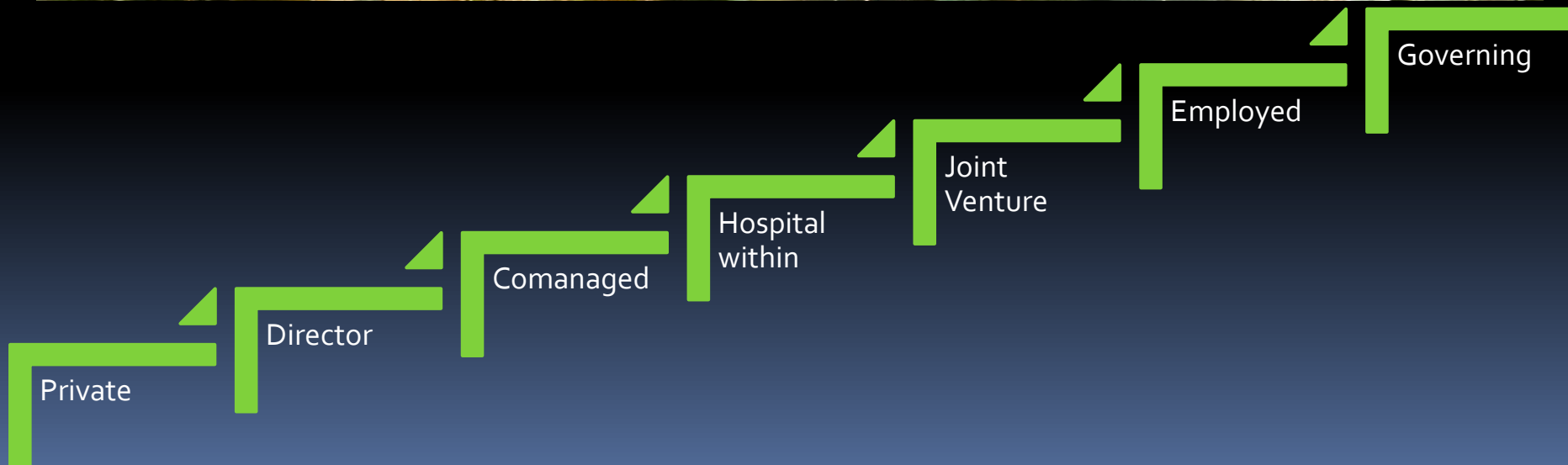


Economics

The allocation of
scarce resources
that have
alternative uses.



Spectrum of Hospital Affiliation



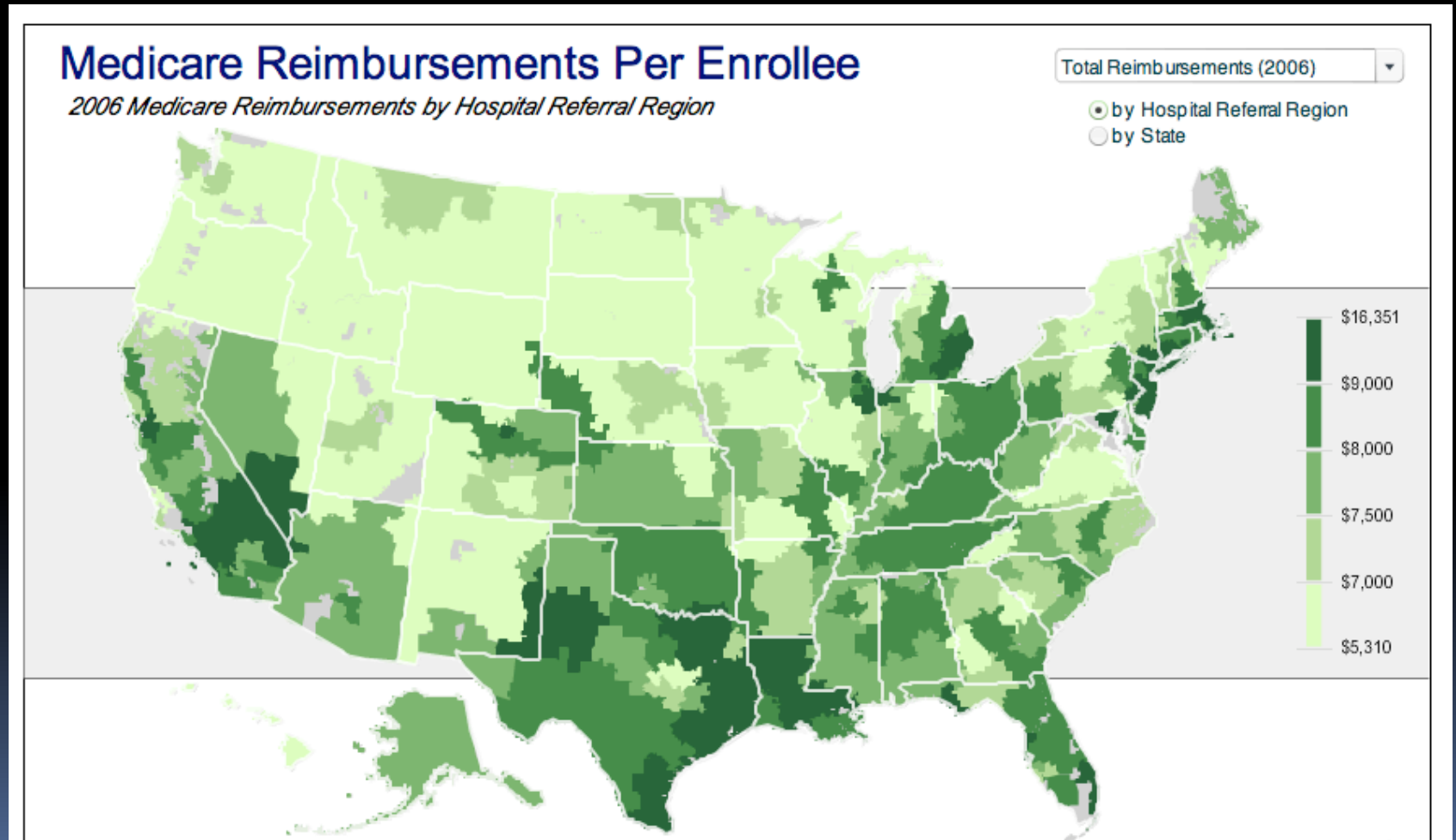
The Value of an Organized Fracture Program for the Elderly: Early Results

Stephen L. Kates, MD, Daniel A. Mendelson, MS, MD,† and Susan M. Friedman, MD, MPH†*

| | Readmission | Death | Complications | Cost |
|-----------|-------------|-------|---------------|----------|
| Comanaged | 97 | 15 | 306 | \$7,610 |
| Predicted | 194 | 32 | 1177 | \$11,417 |



Examine variation in care



Pay for Performance



Appropriate
use criteria

A Comparison of Fracture Reductions Performed by Physician Extenders and Orthopaedic Residents in the Acute Pediatric Orthopaedic Practice

Christine A. Ho, MD and Philip L. Wilson, MD



Physician Assistants in Orthopaedic Surgery

- 83,466 clinically practicing PA's
- Ortho Surgery 8,688 approx.



Economic Research

JBJS

The Journal of
Bone and Joint Surgery

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The Journal of Bone & Joint Surgery, Volume 89, Issue 8

Scientific Articles | August 01, 2007

Health-Care Costs Associated with Amputation Reconstruction of a Limb-Threatening Injury

Ellen J. MacKenzie, PhD¹; Renan C. Castillo, MS¹; Alison Snow Jones, PhD²; Michael J. Bosse, MD³; J. Kellam, MD³; Andrew H. Pollak, MD⁴; Lawrence X. Webb, MD⁵; Marc F. Swiontkowski, MD⁶; Douglas G. MD⁷; Roy W. Sanders, MD⁸; Alan L. Jones, MD⁹; Adam J. Starr, MD¹⁰; Mark P. McAndrew, MD¹¹; Brend Patterson, MD¹²; Andrew R. Burgess, MD¹³

¹ Center for Injury Research and Policy, Johns Hopkins Bloomberg School of Public Health, 624 North Broadway Baltimore, MD 21205. E-mail address for E.J. MacKenzie: emackenz@jhsph.edu



Occupational Therapy

JBJS The Journal of Bone and Joint Surgery

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The Journal of Bone & Joint Surgery, Volume 93, Issue 19

Scientific Articles | October 05, 2011

A Prospective Randomized Controlled Trial Comparing Occupational Therapy with Independent Exercises After Volar Plate Fixation of a Fracture of the Distal Part of the Radius

J. Sebastiaan Souer, MD¹; Geert Buijze, MD¹; David Ring, MD, PhD¹

¹ Orthopaedic Hand and Upper Extremity Service, Massachusetts General Hospital, Yawkey 2100, 55 Fruit Street, Boston, MA 02114. E-mail address for D. Ring: dring@partners.org

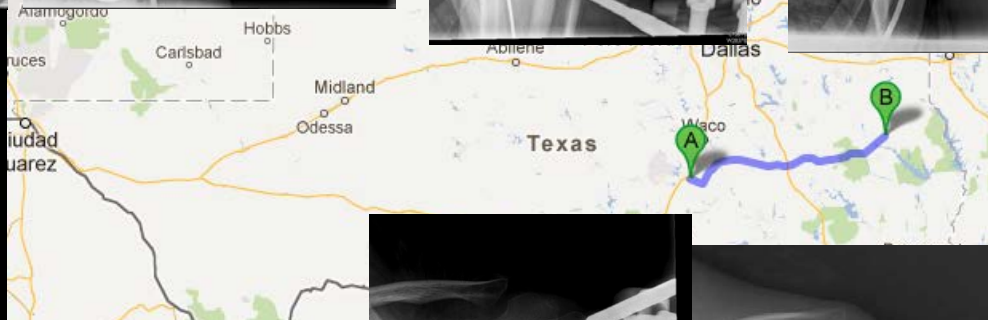
[View Disclosures and Other Information](#)

J Bone Joint Surg Am, 2011 Oct 05;93(19):1761-1766. doi: 10.2106/JBJS.J.01452













**ORTHOPAEDIC
—TRAUMA—
ASSOCIATION**