

J. BRADFORD RICE, PH.D.
Managing Principal

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Dr. Rice is an economist with a range of expertise in health economics, industrial organization, statistics, and econometrics. He has extensive experience applying economic theory and statistical methods in complex litigation and research settings. Dr. Rice has led analyses related to government investigations and litigation matters, where he has supported counsel and been retained as an expert on alleged Anti-Kickback Statute and False Claims Act violations, as well as on antitrust, cryptocurrency, insider trading, misappropriation of trade secrets, and breach of contract issues. In matters related to liability and damages, he conducts empirical analyses involving large-scale databases on a range of topics, including causal inference, merger simulation, and budget impact. Dr. Rice's case experience has involved providing assistance in the preparation of expert reports, testimony, and rebuttal analyses and arguments; developing sophisticated interactive models enabling real-time damages assessments under alternative scenarios; and presenting analyses to US Attorney's Office investigators. In addition to his litigation work, he has provided econometric and statistical consulting on matters such as economic research questions, risk management, fair market valuation, and compliance. Dr. Rice is adjunct faculty in the Harvard University Department of Economics and has taught undergraduate courses on econometrics, health economics, industrial organization, and regulatory economics. He has published extensively in numerous peer-reviewed journals, and presented at conferences and seminars.

EDUCATION

2003–2008 Ph.D., economics, and M.A., political economy, Boston University
2001–2002 Visiting student, mathematics, Johns Hopkins University
1997–2001 B.A., economics, University of Florida

PROFESSIONAL EXPERIENCE

2008–Present Analysis Group, Inc.
 Managing Principal (2021–Present)
 Vice President (2015–2021)
 Manager (2011–2014)
 Associate (2008–2010)

2016–Present Harvard University
 Adjunct Faculty, Department of Economics

2005–2008 Boston University
 Lecturer and Research Assistant, Department of Economics

2001–2008 Johns Hopkins University
 Research Assistant and Consultant, Department of Economics,
 Bloomberg School of Public Health and School of Medicine

2004–2005 Tufts University
Research Assistant, Department of Economics

2001 Florida Department of Environmental Protection
Economist, Central District

SELECTED CONSULTING EXPERIENCE & CASE WORK

Antitrust

- ***US and Plaintiff States v. Anthem, Inc. and Cigna Corp.***
US District Court, District of Columbia
Supported expert analysis and testimony of merger simulation involving potential upstream and downstream impacts of a proposed large-scale merger.
- **Confidential retrospective horizontal merger analysis**
Provided support for expert analysis and testimony regarding alleged antitrust issues in a prior horizontal merger in the home building products industry.
- **Confidential agriculture antitrust issue**
Supported expert analysis involving alleged monopsony and monopoly claims in an agricultural industry.

Anti-Kickback Statute and False Claims Act

- **Confidential Anti-Kickback Statute matter**
Provided expert analysis in a criminal matter involving alleged violations of the Anti-Kickback Statute by a former pharmaceutical executive.
- **Confidential off-label marketing matter**
Provided expert analysis addressing causation and damages analyses associated with alleged False Claims Act violations.
- ***United States of America, et al. v. Solvay***
US District Court, Southern District of Texas
Supported expert testimony regarding causation and damages associated with alleged off-label promotion of Androgel, Aceon, and Luvox.
- ***United States ex rel. Strom v. Scios, Inc. and Johnson & Johnson***
US District Court, Northern District of California, San Francisco
Supported economic expert in analyzing the impact of alleged off-label promotion and payment of kickbacks with respect to Natrecor.
- **Zyprexa Litigation**
US District Court, Eastern District of Pennsylvania; and South Carolina Courts of Common Pleas
Supported multiple economic and statistics experts in assessments of causation, damages, and cost-effectiveness of Zyprexa.

Breach of Contract

- ***AbbVie, Inc. v. Biogen, Inc.***
American Arbitration Association
Supported expert testimony regarding profit maximization and alleged breach of contract violations.
- ***Providence Health Plan v. Express Scripts, Inc.***
American Arbitration Association
Supported expert testimony regarding alleged loss in rebate revenues due to breach of contract.
- ***Onyx Pharmaceuticals, Inc. v. Bayer Corporation, Bayer AG, Bayer Healthcare LLC, and Bayer Schering Pharma AG***
US District Court, Northern District of California, San Francisco
Supported economic expert in analyzing lost profits stemming from breach of contract claims.

Other Selected Case Work

- **Cryptocurrency intellectual property issue**
Supported expert analysis of the value of an alleged trademark violation in cryptocurrency.
- **Confidential arbitration involving intellectual property issue in pharmaceuticals**
Supported economic and health care experts in analyses of lost profits and damages resulting from alleged violation of a patent in a rare disease pharmaceutical area.
- ***Ischemia Research and Education Foundation v. Pfizer Inc.***
Superior Court of the State of California, County of Santa Clara
Supported statistics, economics, and clinical experts in various analyses of lost profits and damages resulting from alleged misappropriation of trade secrets.
- **Insider trading**
Supported multiple experts in association with criminal insider trading allegations for a former hedge fund portfolio manager.
- **Statistical consulting (multiple)**
Assisted counsel and clients with development of various statistical analyses and sampling algorithms.
- **Daiichi Sankyo**
International arbitration
Supported an economic expert in analyzing potential inflated share prices due to alleged fraudulent representations in an acquisition of a pharmaceutical company.
- **Fair market valuation (multiple)**
Performed fair market valuations for physician compensation agreements and fee schedules related to service agreements.
- **Prevailing wages**
Performed analyses to estimate hours worked and damages associated with a failure to pay prevailing wages and overtime.
- **Analyses related to abuse or misuse of controlled substances**
Conducted various statistical and economic analyses related to prescription opioids, including economic burden studies with attention to prevalence and costs of diagnosed and undiagnosed abuse

to public and private payers, and development of multivariate risk models to assess risk factors associated with abuse or misuse.

- **Confidential Food and Drug Administration (FDA) matter**
Supported expert testimony regarding potential economic consequences of removing an existing pharmaceutical product from the market.
- **Government investigations concerning pharmaceutical and medical device marketing practices**
Evaluated alleged conduct, quantified relevant sales, and performed causation analyses using econometric and statistical approaches associated with multiple government investigations of alleged kickback payments to physicians, off-label marketing, improper pricing, and other allegations related to pharmaceuticals and medical devices. Developed, implemented, and presented analyses to investigators with respect to liability, damages, and other economic considerations. US District Court cases include:
 - Xifaxan, Apriso, Relistor, and multiple additional products/Valeant and Salix Pharmaceuticals (Southern District of New York)
 - Namenda, Bystolic, Savella/Actavis and Forest Laboratories (Eastern District of Wisconsin)
 - Septrafilm/Sanofi Genzyme (Middle District of Florida)
 - Xibrom/Bausch & Lomb (Western District of New York)
 - Keppra/UCB (District of Columbia)
 - Bone growth stimulators/Orthofix (District of Massachusetts)
 - Prograf/Astellas (Northern District of Illinois)
 - Rapamune/Pfizer (Western District of Oklahoma)
 - Onyx, Axium/ev3 and Covidien (District of Massachusetts)
 - Lyrica, Zyvox/Pfizer (District of Massachusetts)
 - Protonix/Pfizer (District of Massachusetts)

ARTICLES & PUBLICATIONS

“Predictors of High-cost Patients With Noninfectious Inflammatory Eye Diseases,” WW Nelson, JB Rice, AG White, M Johnson, J Reiff, AF Lima, L Bartels-Peculis, G Ciepiewska, TA Albini, *Clinical Therapeutics*; doi: <https://doi.org/10.1016/j.clinthera.2019.09.011> (2019)

“Economic Burden of Non-Infectious Inflammatory Eye Disease (NIIED) in a Commercially-Insured Population in the United States,” TA Albini, JB Rice, AG White, M Johnson, J Reiff, AF Lima, L Bartels-Peculis, G Ciepiewska, WW Nelson, *Ocular Immunology and Inflammation*; 02: 1–11. e-pub ahead of print 2019/02/23; doi: <https://doi.org/10.1080/09273948.2018.1560476> (2019)

“The burden of non-infectious intraocular inflammatory eye diseases: a systematic literature review,” JB Rice, AG White, LM Scarpati, GJ Wan, WW Nelson, *Current Medical Research and Opinion*; 09: 1–9. e-pub ahead of print 2018/08/17; doi: <https://doi.org/10.1080/03007995.2018.1512961> (2018)

“Healthcare resource use and cost associated with varying dosages of extended corticosteroid exposure in a US population,” JB Rice, AG White, M Johnson, A Wagh, Y Qin, L Bartels-Peculis, G Ciepielewska, and WW Nelson, *Journal of Medical Economics*; 23: 1–7 (2018)

“Quantitative characterization of the relationship between levels of extended corticosteroid use and related adverse events in a US population,” JB Rice, AG White, M Johnson, A Wagh, Y Qin, L Bartels-Peculis, G Ciepielewska, and WW Nelson, *Current Medical Research and Opinion*; 23: 1–9 (2018)

“Long-term Systemic Corticosteroid Exposure: A Systematic Literature Review,” JB Rice, AG White, LM Scarpati, G Wan, and WW Nelson, *Clinical Therapeutics*; 39(11): 2216–2229 (2017)

“The burden of hepatorenal syndrome among commercially insured and Medicare patients in the United States,” JB Rice, AG White, P Galebach, KM Korenblat, A Wagh, B Lovelace, GJ Wan, and K Jamil, *Current Medical Research and Opinion*; 33(8): 1473–1480 (2017)

“Economic burden of sarcoidosis in a commercially-insured population in the United States,” JB Rice, A White, A Lopez, A Conway, A Wagh, WW Nelson, M Philbin, and GJ Wan, *Journal of Medical Economics*; (10): 1048–1055 (2017)

“High-cost sarcoidosis patients in the United States: Patient characteristics and patterns of health care resource utilization,” JB Rice, A White, A Lopez, and WW Nelson, *Journal of Managed Care and Specialty Pharmacy*; (12): 1261–1269 (2017)

“Healthcare resource utilization and work loss in dermatomyositis and polymyositis patients in a privately-insured US population,” JB Rice, A White, A Lopez, P Galebach, P Schepman, B Popelar, and M Philbin, *Journal of Medical Economics*; 19(7): 649–654 (2016)

“The burden of undiagnosed opioid abuse among commercially-insured individuals,” NY Kirson, A Shei, JB Rice, CJ Enloe, K Bodnar, HG Birnbaum, P Holly, and R Ben-Joseph, *Pain Medicine*; 16(7): 1325–1332 (2015)

“Characteristics of high-cost patients diagnosed with opioid abuse,” A Shei, JB Rice, NY Kirson, K Bodnar, CJ Enloe, HG Birnbaum, P Holly, and R Ben-Joseph, *Journal of Managed Care & Specialty Pharmacy*; 21(10): 902–912 (2015)

“Economic outcomes among Medicare patients receiving bioengineered cellular technologies for treatment of diabetic foot ulcers,” JB Rice, U Desai, L Ristovska, AKG Cummings, HG Birnbaum, M Skornicki, DJ Margolis, and N Parsons, *Journal of Medical Economics*; 18(8): 586–595 (2015)

“Sources of prescription opioids among diagnosed opioid abusers,” A Shei, JB Rice, NY Kirson, K Bodnar, HG Birnbaum, P Holly, and R Ben-Joseph, *Current Medical Research & Opinion*; 31(4): 779–784 (2015)

“The economic burden of diagnosed opioid abuse among commercially insured individuals,” JB Rice, NY Kirson, A Shei, CJ Enloe, AKG Cummings, HG Birnbaum, P Holly, and R Ben-Joseph, *Postgraduate Medicine*; 126(4): 53–58 (2014)

“Estimating the costs of opioid abuse and dependence from an employer perspective: a retrospective analysis using administrative claims data,” JB Rice, NY Kirson, A Shei, AKG Cummings, HG Birnbaum, and R Ben-Joseph, *Applied Health Economics and Health Policy*; 12(4): 435–446 (2014)

“Medical, drug, and work-loss costs of diabetic foot ulcers,” JB Rice, U Desai, AKG Cummings, HG Birnbaum, M Skornicki, and N Parsons, *Diabetes Care*; 37: 651–658 (2014)

“Burden of diabetic foot ulcers for Medicare and private insurers,” Rice JB, Desai U, Cummings AK, Birnbaum HG, Skornicki M, Parsons NB, *Diabetes Care*; 11; 37(3): 651–658. doi: <https://doi.org/10.2337/dc13-2176> (2014)

“Burden of venous leg ulcers in the United States,” JB Rice, U Desai, AKG Cummings, HG Birnbaum, M Skornicki, and N Parsons, *Journal of Medical Economics*; 17(5): 347–356 (2014)

“A model to identify prescription opioid abuse, dependence, and misuse,” JB Rice, AG White, HG Birnbaum, M Schiller, DA Brown, and CL Roland, *Pain Medicine*; 13(9): 1162–1173 (2012)

“Characteristics and use patterns of chronic hydrocodone users,” JB Rice, TM Samuelson, HG Birnbaum, and NP Katz, *Journal of Pain*; 13(4) Supplement: S80 (2012)

“Stability and changes in living arrangements: relationship to nursing home admission and timing of placement,” J Kasper, LE Pezzin, and JB Rice, *Journal of Gerontology: Social Sciences*; 65B(6): 783–791 (2010)

“A comparative analysis of Medicaid long-term care policies and their effects on elderly dual-enrollees,” JB Rice, JD Kasper, and LE Pezzin, *Health Economics*; 18(3): 275–290 (2009)

“Nerve injury in patients following hip and knee arthroplasties and knee arthroscopy,” JN Yacub, JB Rice, and TR Dillingham, *American Journal of Physical Medicine & Rehabilitation*; 88(8): 635–641 (2009)

“The incidence of peripheral nerve injury in extremity trauma,” C Taylor, D Braza, JB Rice, and TR Dillingham, *American Journal of Physical Medicine & Rehabilitation*; 87(5): 381–385 (2008)

Exploiting agglomeration to survive globalization, JB Rice, Ph.D. dissertation, Department of Economics, Boston University (2008)

Moral hazard in long-term guaranteed contracts: theory and evidence from the NBA, JB Rice and A Sen, Ph.D. dissertation, Department of Economics, Boston University (2008)

An interstate test of international offshorability rankings, JB Rice, Ph.D. dissertation, Department of Economics, Boston University (2008)

Evidence of a collusive automobile industry? Bresnahan (1987) meets BLP, DS Rapson and JB Rice, Ph.D. dissertation, Department of Economics, Boston University (2008)

A dynamic model of policy and health effects on living arrangement transitions of elderly persons, JB Rice, LE Pezzin, and JD Kasper, iHEA 6th World Congress: Explorations in Health Economics paper (2007)

“Spasticity treatment services in patients with cerebral palsy in the United States,” M Ocasio-Silva, E Moberg-Wolff, TR Dillingham, and JB Rice, *Archives of Physical Medicine and Rehabilitation*; 88(9): E81 (2007)

“Electrodiagnostic services in the United States,” TR Dillingham, LE Pezzin, and JB Rice, *Muscle and Nerve*; 29(2): 198–204 (2004)

Publication Referee

The American Journal of Managed Care

Journal of Health Economics

The American Journal of Pharmacy Benefits

Journal of Labor Economics

Health Economics

Journal of Medical Economics

International Journal of Drug Policy

Journal of Sport Management

PRESENTATIONS & SPEAKING ENGAGEMENTS

Ninth Annual Pharmaceutical and Medical Device Seminar; Skadden, Arps, Slate, Meagher & Flom, New York, NY, October 2019 (plenary speaker)

Law and Economics Symposium; Massachusetts Institute of Technology, Cambridge, MA, May 2019 (panelist)

American College of Rheumatology Annual Scientific Meeting; San Diego, CA, November 3–8, 2017 (podium presentation)

American College of Rheumatology Annual Scientific Meeting; Washington, DC, November 11–16, 2016 (poster)

AMCP Nexus 2015; Orlando, FL, October 26–29, 2015 (poster)

ISPOR 19th Annual International Meeting; Montreal, QC, Canada, May 31–June 4, 2014 (poster)

6th Biennial Conference of the American Society of Health Economists; University of Pennsylvania, Philadelphia, PA, June 2016 (discussant)

4th Annual International Industrial Organization Conference; Drexel University, Philadelphia, PA, April 2016 (chair)

5th Biennial Conference of the American Society for Health Economists; University of Southern California, Los Angeles, CA, June 2014 (chair)

ISPOR 18th Annual Meeting; New Orleans, LA, May 2013 (poster and podium presentation)

Symposium for Advanced Wound Care (SAWC) Spring; Denver, CO, May 2013 (poster)

31st Annual Scientific Meeting of the American Pain Society (APS); Honolulu, HI, May 2012 (poster)

PAINWeek; Las Vegas NV, September 2012 (poster)

American Academy of Pain Medicine (AAPM) 2012 Annual Meeting; Palm Springs, CA, February 2012 (poster)

MIT Sloan Sports Analytics Conference; Boston, MA, March 2011 (podium presentation)

PAINWeek; Las Vegas, NV, September 2011 (poster)

AEA/ASSA Annual Meeting; New Orleans, LA, January 2008 (discussant)

Microeconomics Seminar; Boston University, Boston, MA, November 2007 (discussant)

Microeconomic Theory Seminar; Boston University, Boston MA, November 2007 (podium presentation)

Empirical Microeconomics Seminar; Boston University, Boston, MA, October 2007 (podium presentation)

International Health Economics Association (iHEA) 6th World Congress; Copenhagen Business School, Copenhagen, Denmark, July 2007 (podium presentation and chair)

PROFESSIONAL ASSOCIATIONS AND MEMBERSHIPS

2008–Present Member, board of directors, Katherine Swan Ginsburg Humanism in Medicine Program, Beth Israel Deaconess Medical Center

2008–Present Member, American Economic Association (AEA)

2010–Present Member, American Society for Health Economists (ASHEcon)

2010–Present Member, International Health Economics Association (iHEA)

2016–Present Member, American Health Lawyers Association (AHLA)

AWARDS

2022 Certificate of Distinction in Teaching, Harvard University

2013 Best Podium Presentation, ISPOR Research Presentation Podium Award, for the presentation “Medical, drug, and work-loss costs of diabetic foot ulcers”

2011 Best Research Paper, MIT Sloan Sports Analytics Conference, for the paper “Moral hazard in long-term guaranteed contracts: theory and evidence from the NBA”

2009 Ernest W. Johnson Excellence in Research Writing Award, Association of Academic Physiatrists, for the paper “The incidence of peripheral nerve injury in extremity trauma”

- 2008 Sustained Excellence in Teaching Services Award, Department of Economics, Boston University
- 2001 Outstanding Contribution, Florida Department of Environmental Protection

Graduate Distinctions

Institute for Economic Development Student Research Award, various Boston University scholarships (Graduate School of Arts and Sciences Senior Teachers' Scholarship, Graduate School of Management Doctoral Scholarship, Economics Teaching Fellow Scholarship, Graduate School of Arts and Sciences Research Assistant Scholarship)

Undergraduate Distinctions

Graduation with honors (*cum laude*), Dean's List (various semesters), Omicron Delta Epsilon, Johns Hopkins University Visiting Student Scholarship, Florida Academic Scholarship, Florida Merit Scholarship