

EMMETT B. KEELER

EDUCATION

Ph.D., Mathematics, 1969, Harvard University, Cambridge, Massachusetts
B.A. *summa cum laude*, Mathematics, 1962, Oberlin College, Oberlin, Ohio

PROFESSIONAL EXPERIENCE

1968- Present -- Senior Mathematician, RAND, Santa Monica, California.
1975 - present -- Professor of Mathematics, Pardee RAND Graduate School
2000 – present -- Adjunct Professor of Health Services, UCLA Public Health School
1981-1982; 1974-1975 — Research Associate, Harvard Public Health School,
Boston, Massachusetts
Fall 1973 — Visiting Associate Professor, Economics Department, University of
Chicago, Chicago, Illinois
1969-1970 — Research Fellow, JFK School of Public Policy, Harvard University,
Cambridge, Massachusetts.

RESEARCH AREAS

Health Economics. Studied the effects of competition on hospital prices. Studied the potential impact of Medical Savings Account legislation on the number of uninsured, medical spending and adverse selection. Studied the impact of various central payer reimbursement schemes on adverse selection and waste. Studied the theoretical and actual effects of deductibles in Health Insurance. Directed the episodes of treatment work on the RAND Health Insurance Study. Studied effects of insurance on episodes of mental health, and on the health of people with specific "tracer" diseases. Studied ways to improve HCFA outlier payments. Helped the Chinese develop a rural health insurance demonstration.

Health Policy Analysis. Studied the effects of Prospective Payment System on quality of care. Studied the effects of sickness on mortality of hospital patients, and ways to evaluate hospital quality. Developed a model of the cost of bad habits to estimate appropriate "sin" taxes. Principal Investigator for Management and Outcomes of Childbirth Patient Outcome Research Team. Principal Investigator for the Improvement of Chronic Illness Care Evaluation. Led modeling on Gates project on evaluating new diagnostic tools for tropical diseases.

Cost-Effectiveness. Analyzed screening children for hypercholesterolemia. Keeler-Cretin Paradox shows why future health should be discounted. Leader of RAND cost-effectiveness core for UCLA "Pepper Center" that tests interventions to aid the old and frail. Recent papers on cost effectiveness of autologous blood transfusion, breast cancer screening and treatment, screening outreach programs, external cephalic version, Kinair beds and comprehensive geriatric assessment.

Planning. Developed methodology for manuals to enable health planners to use health statistics data in their decisions. Analyzed data on the care of the elderly and developed models to project the need for geriatric physicians.

Mathematics. Thesis: Projective Metrics and Economic Growth Models (under G. Birkhoff, K. Arrow); also studied game theory, ergodic theorems in demography.

TEACHING:

Cost-Effectiveness Analysis in Health Care: AHSR 1 day course, 1998-2006
Analytic Methods for Policy Analysis, RAND Graduate School, 1979-1990, 1996-present.
Health Economics, RAND Graduate School, 1983-1990
Health Economics, UCLA Public Health School 1991-1999
Decision Analysis, UCLA Public Health School, 1991-present. Now half of course 249G.
Policy Analysis, West China University, 1987.
Analytic Methods, University of Colorado, Business Administration Institute, 1988.
Quantitative Methods in Health Policy Analysis, Harvard Public Health School, 1975.
Mathematics for Economics, University of Chicago, 1973.
Linear Programming, University of Southern California, 1972.
Teaching Assistant to Howard Raiffa, Harvard Public Policy School, 1969.
Calculus, Linear Algebra Instructor and Proctor, Harvard 1965-1967.

STUDENTS TRAINED

RAND PhD dissertations chaired: Hanon Alon, 1983; Michael McGinty, 1992; Bill Dean, 1994; Jesse Malkin, 1998; Frederick Beddingfield, 2002. Tatiana Andreyevna 2006, Katerina Fonkych 2006.

Other Rand Graduate School dissertation committees: Robert Valdez, Mark Triplett, Thomas Bradley, John Hernandez, Jennie Gross, Meredith Kilgore, HongJun Kan, Arash Naeim, Arkadipta Ghosh, Haijun Tian, Jill Hoube

UCLA Clinical Scholars Mentored: Jeff Etchason, David Ganz, David Gifford, Arleen Brown, Katherine Watkins, Chien-Wen Tseng.

PROFESSIONAL ORGANIZATIONS/HONORS

International Health Economics Association
Mathematics Association of America
Association for Health Services Research (AHSR)
AHSR Article-of-the-Year Award, 1989, 1990, 1994
Chair, AHSR Article of the year award committee, 1991
Fellow of AHSR (elected 1996)
Distinguished Investigator Award AcademyHealth, 2003
Institute of Medicine Committee on Health Effectiveness, 1989
National Eye Institute Task force on Vision screening in the preschool child, 1999
NIH Consensus Panel on Use of Steroids for Fetal Maturation, 1993-4.
NIH Consensus Panel on Repeat courses of Antenatal Steroids, 1999.
NAS Committee to review scientific evidence on the polygraph, 2001
Institute of Medicine Subcommittee on the Economic Consequences of Insurance, 2003
Institute of Medicine Committee to evaluate Measures of Health Benefits for Environmental, Health and Safety Regulations, 2004
Health Services Research Study Section (AHCPR), 1991-1995
Editorial Board, Medical Decision Making 1981-84
Editorial Board, Medical Care Research and Review (1995-1997)
Editor, Health Services and Outcomes Research Methodology (1999-2003)
National Merit Scholar, Woodrow Wilson Scholar
Phi Beta Kappa, Sigma Xi
National Science Foundation Fellowship
Erdos number = 2 through Joel Spencer and also through A Meir.

MAJOR GRANTS OBTAINED AS PRINCIPAL INVESTIGATOR

Improvement of Chronic Illness Care Evaluation, Robert Wood Johnson, 2/1/99-11/31/2004. Total costs = \$8.4 million of which 2.1 million are subcontracts to other organizations.
Cost effectiveness Core subcontract to UCLA Older Americans Independence Center: NIA : 5Pg0 AG10415: 7/91-6/11. Total Costs of subcontract = \$599,952 for first five years, each five years renewal slightly more.
Management and Outcomes of Childbirth PORT, Agency for Health Care Policy Research 282-90-0039: 9/90-3/97 total costs \$6,438,918.

PUBLICATIONS

BOOKS

Free for All: Lessons from the RAND Health Insurance Experiment JP Newhouse, et al., Harvard U.P., Fall 1993.

Taxes and Lifestyles: What We All Pay for Smoking, Drinking and Inactivity, W. Manning, E. Keeler, et al. Harvard University Press, 1991.

Geriatrics in the United States: Manpower Projections and Training Considerations, R. L. Kane, et al.. D. C. Heath, Lexington, Massachusetts, February 1981.

Children, Cholesterol and Heart Disease: An Analysis of Alternatives, D. Berwick, S. Cretin, E. Keeler, Oxford University Press, July 1980.

RAND REPORTS

Assessing the Performance of Mortality Prediction Models, D.C. Hadorn, E. B. Keeler, W. H. Rogers, R. H. Brook, MR-181-HCFA, RAND, 1993.

Assessing Quality of Care for Hospitalized Medicare Patients with Hip Fracture Using Coded Diagnoses for the MEDPAR Files, E.B. Keeler, K. Kahn, and Stan Bentow, N-3450, August 1992.

Choosing Quality-of-Care Measures Based on the Expected Impact of Improved Quality-of-Care for the Major Causes of Mortality and Morbidity, A.L. Siu, et al., JR-03, 1992.

The Effects of DRG-Based Prospective Payment System on Quality of Care for Hospitalized Medicare Patients, K. Kahn, D. Draper, E. Keeler et al., R-3931-HCFA, 1991.

The Effects of DRG-Based Prospective Payment System on Quality of Care for Hospitalized Medicare Patients: Executive Summary, K. Kahn, D. Draper, E. Keeler et al., R-3930-HCFA, 1991.

Causes and Effects of Expensive Hospitalizations, E. Keeler, N-3205-HCFA, 1991.

A Summary of the Effects of DRG-Based Prospective Payment System on Quality of Care for Hospitalized Medicare Patients, K. Kahn, D. Draper, E. Keeler, et al., N-3132-HCFA, October 1990.

Explaining Variations in Hospital Death Rates: Randomness, Severity of Illness, Quality of Care, R. E. Park et al., R-3887-HCFA, 1990.

Short-Term Health Effects of Air Pollution: A Case Study, N. Duan, et al., R-3496-EPA January 1990.

Mandating Health Insurance Benefits for Employees, M.S. Marquis, J.L. Buchanan, E.B. Keeler, et al., RAND, N-2911-DOL, February 1989.

Are the DRG Case Weights Compressed? K. Thorpe, S. Cretin, E. Keeler, RAND, N-2510-HCFA, June 1988.

The Demand for Episodes of Medical Treatment in the Health Insurance Experiment, E. Keeler, et al., RAND, R-3454-HHS, March 1988.

Health Insurance and the Demand for Medical Care: Evidence from a Randomized Experiment, W.G. Manning et al., RAND, R-3476-HHS, March 1988.

Health Outcomes for Adults in Prepaid and Fee-for Service Systems of Care: Results from the Health Insurance Experiment, J. Ware et al., RAND, R-3459-HHS, October 1987.

Effects of a Health Maintenance Organization on Physiologic Health: Results from a Randomized Trial, E. Sloss et al., RAND, R-3526-HHS, May 1987.

Conceptualization and Measurement of Physiologic Health for Adults: Overview of Chronic Disease in a General Adult Population, K. Lohr et al., RAND, R-2262/1-HHS, November 1986.

Short-Term Health Effects of Air Pollution: A Case Study, N. Duan, et al., RAND, R-3496-EPA.

The Demand for Episodes of Mental Health Services, E. Keeler et al., RAND, R-3432-NIMH, October 1986.

The Effects of Cost-Sharing on the Use of Medical Services by Children, A. Leibowitz et al., RAND, R-3287-HHS, September 1985.

Effects of Air Pollution on Health Outcomes, W. Manning, et al., RAND, R-3272-EPA, August 1985.

The Episodes of Illness Processing System, J. Keesey, E. Keeler, The RAND Corporation, N-1745-1-HHS, January 1985.

The Effect of Coinsurance on the Health of Adults, R. Brook et al., The RAND Corporation, R-3055-HHS, December 1984.

The Demand for Episodes of Medical Services: Interim Results from the Health Insurance Experiment, E. Keeler et al., The RAND Corporation, R-2829-HHS, January 1983.

Conceptualization and Measurement of Physiological Health for Adults in the HIS: Hypercholesterolemia, R. Brook, et al., The RAND Corporation, R-2262-11-HHS, September 1981.

Hypertension: An Algorithm for Health Planners, D. Drew, and E. Keeler, The RAND Corporation, R-2215/6, August 1977.

Heart Attack Mortality: An Algorithm for Health Planners, J. Harris, Keeler et al., The RAND Corporation, R-2215/4, August 1977.

Breast Cancer Mortality: An Algorithm for Health Planners, A. Kisch, and E. Keeler), The RAND Corporation, R-2215/3, August 1977.

Infant Mortality: An Algorithm for Health Planners, J. Harris, Keeler et al., The RAND Corporation, R-2215/2, August 1977.

Algorithms for Health Planners: An Overview, J. Harris, Keeler et al., The RAND Corporation, R-2215/1, August 1977.

Cost-Benefit Analysis and Biomedical Research, A. Williams et al., The RAND Corporation, R-1945-PBRP/RC, March 1976.

United States Grain Reserves Policy: Objectives, Costs and the Distribution of Benefits, The RAND Corporation, R-2087-RC, September 1976.

Family and Individual Deductibles, E. Keeler, J. Rolph, and D. Relles, The RAND Corporation, R-1393-OEO/HEW, October 1975.

A Classification of Large American Urban Areas, E. Keeler and W. Rogers, The RAND Corporation, R-1246-NSF, May 1973.

Teacher Turnover, The RAND Corporation, R-1325-HEW, October 1973.

Models of Disease Costs and Their Use in Medical Research Resource Allocations, The RAND Corporation, P-4537, December 1970.

Projective Metrics and Economic Growth Models, The RAND Corporation, RM-6153-PR, September 1969.

SUBMITTED ARTICLES

Frederick C. Beddingfield, III, Emmett B. Keeler. Estimating the Effectiveness and Cost-Effectiveness of Melanoma Screening,

Shin yi Wu et al. , “ A Cost-effectiveness Analysis of falls prevention as a healthy aging policy”

ACCEPTED ARTICLES

Rayburn, N. et al., "Predicting Six Month Depression Outcomes for Primary Care Patients with Major Depression: Development and Performance of a Depression Prognosis Index"

Glenn Melnick, Emmett Keeler, "The effects of multi-hospital systems on hospital prices". Accepted by *J Health Economics*

RB Vargas et al., "Can a chronic care Model Collaborative Reduce heart disease risk in patients with Diabetes?" Accepted by *J Gen Int Medicine*

A Naeim, EB Keeler, "Is Adjuvant Therapy for Older Patients with Node (+) Early Breast Cancer Cost-Effective?", *Breast Cancer Research and Treatment*

Chien-Wen Tseng, R H. Brook, EB Keeler, et al. Cost-cutting Strategies by Seniors with Generic-only Drug Benefits, *Journal General Internal Medicine*

Arash Naeim, Emmett B. Keeler, Peter R Gutierrez, M Roy Wilson, David Reuben, Carol M Mangione, Is cataract surgery cost-effective among older patients with a low predicted probability for improvement in reported visual functioning? *Medical Care*

PUBLISHED PEER REVIEWED ARTICLES (127)

Keeler E, Perkins MD, Small P et al., Reducing the global burden of tuberculosis: the contribution of improved diagnostics *Nature* S1 49-57 (2006)

Girosi F, Olmsted SS, Keeler E et al., Developing and interpreting models to improve diagnostics in developing countries *Nature* S1 3-8 (2006)

125 Meredith LS, Mendel P, Pearson M et al., Implementation and Maintenance of Quality Improvement for Treating Depression in Primary Care. *Psychiatric Services*. 57 48-55, 2006

Geoffrey F. Joyce, Emmett B. Keeler, Baoping Shang, Dana P. Goldman, "The Lifetime Burden of Chronic Disease among the Elderly", *Health Affairs* 2005; Web Exclusive (26 September):18-29.

Baker DW, Asch SM, Keeseey JW, Brown JA, Chan KS, Joyce G, Keeler EB. Differences in education, knowledge, self-management activities, and health outcomes for patients with heart failure cared for under the chronic disease model: the improving chronic illness care evaluation. *J Card Fail.* 2005 Aug; 11(6):405-13.

Asch SM Baker DW Keeseey JW et al., Does the Collaborative Model Improve Care for Chronic Heart Failure? *Medical Care*, 2005; 43 (7): 667-75

Schonlau M , Mangione-Smith, R Mayde Rosen, M Louis,T, Cretin S, Keeler E, An evaluation of an adult asthma BTS collaborative and the effect of patient self-management. *Annals of Family Medicine.* 2005 3: 200-208

120. DW Baker, J Brown, KS Chan, KA Dracup, EB Keeler. A Telephone Survey to Measure Communication, Education, Self-Management, and Health Status for Patients with Heart Failure: The Improving Chronic Illness Care Evaluation (ICICE) *J Cardiac Failure* 2005 (11) 36-42.

A Naeim, EB Keeler, "Is Adjuvant Therapy for Older Patients with Node (-) Early Breast Cancer Cost-Effective?", *Crit Rev Oncol Hematol.* 2005 Jan;53(1):81-9.

Tsai, AC , Morton, SC, Mangione CM, Keeler EB, A Meta-analysis of Interventions to Improve Chronic Illness Care. *American Journal of Managed Care*, 2005 11 478-88

Mangione-Smith R. , Schonlau, M, Chan KS, Keeseey J, Rosen M, Louis TA, Keeler EB., Measuring the Effectiveness of a Collaborative for Quality Improvement in Pediatric Asthma Care: Does Implementing the Chronic Care Model Improve Processes and Outcomes of Care? *Ambulatory Pediatrics* 2005 5 75-82

M Pearson, et al., A Method for Assessing the Implementation of the Chronic Care Model in Quality Improvement Collaboratives, *Health Services Research*, Vol 40 No 4 August 2005, pp.978-996

115. A Naeim Keeler EB Mangione CM, "Options for Handling Missing Data in the Health Utilities Index Mark 3," *Med Decis Making.* 2005 Mar-Apr;25(2):186-98.

Chan KS, Keeler E, Schonlau M, Rosen M, Mangione-Smith R, How Do Ethnicity and Primary Languages Spoke at Home Affect Management Practices and Outcomes in Children and Adolescents with Asthma?, *Archives of Pediatrics & Adolescent Medicine*, 2005; 159: 283-289

N Dhanani, JF O'Leary, E Keeler, A Bamezai, and G Melnick, The Impact of Medicare HMOs on Inpatient Utilization, *Health Services Research.* Vol 39, no. 5, October 2004, pp. 1607 1627

Chodosh J, Seeman TE, Keeler EB, et al. Cognitive Decline in High Functioning Older Persons is Associated with an Increased Risk of Hospitalization, *JAmGerSoc.* (52) 1456-62, 2004

Reuben DB, Seeman TE, Keeler E, Hayes RP, Bowman L, Sewall A, Hirsch SH, Wallace RB, Guralnik JM. Refining the Categorization of Physical Functional Status: The Added Value of Combining Self-Reported and Performance-Based Measures, *Journal of Gerontology: Medical Sciences*, Vol. 59A, No. 10, Oct 2004, pp. 1056-1061

110. Chien-Wen Tseng, Robert H. Brook, Emmett Keeler, W. Neil Steers, Carol M. Mangione. Cost-Lowering Strategies by Medicare Beneficiaries Who Exceed Drug Benefit Caps and Have a Gap in Drug Coverage, *JAMA* August 25, 2004

Reuben DB, Seeman TE, Keeler E, et al. The Effect of Self-Reported and Performance-Based Functional Impairment on Future Hospital Costs of Community-Dwelling Older Persons. *The Gerontologist* 2004;44(3):401-407.

Cretin S, Shortell SM, and Keeler EB. An Evaluation of Collaborative Interventions to Improve Chronic Illness Care: Framework and Study Design, *Evaluation Review* February 2004, 28(1):28-51.

Tseng CW, Brook RH, Keeler EB, and Mangione CM. Impact of an Annual Dollar Limit or "Cap" on Prescription Drug Benefits for Medicare Patients," *JAMA*:2003 (290):222-227.

Reuben, D., E Keeler, TE Seeman, et al. Identification of Risk for High Hospital Utilization: Cost-Effectiveness of Four Strategies and Performance Across Subgroups, *Journal of the American Geriatric Society* 2003, 51:615-20.

105. Chou CF, Hay JW, Wallace JF, et al. Development and Validation of a Grading System for the Quality of Cost-Effectiveness Studies, *Medical Care* 2003 (41):32-44.

Malkin JD, Keeler E, Broder MS, Garber S. Postpartum Length of Stay and Newborn Health: A Cost-Effectiveness Analysis. *Pediatrics* 2003, 111:e316-322.

Bozzette SA, Boer R, Bhatnagar V, Brower JL, Keeler EB, Morton SC, Stoto MA. A Model for a Smallpox Vaccination Policy. *New England Journal of Medicine.* 2003 348 416-425. Online publication at <http://www.nejm.org> on December 19, 2002 .

Reuben DB, Keeler E, Seeman TE, et al., Development of a Method to Identify Seniors at High risk for High Hospital Utilization, *Medical Care* 2002, 40:782-793.

Nelson, K., RE Garcia, J Brown, CM Mangione, E Keeler, and S Cretin. Do Patient Consent Provisions Affect Participation Rates in Quality Improvement Studies? Data from the Improving Chronic Illness Care Evaluation, *Medical Care.* 2002;40(4):283-288.

100. Malin, J., E Keeler, C Wang, and R Brook. Using Cost-Effectiveness Analysis to Define a Breast Cancer Benefits Package for the Uninsured, *Breast Cancer Research and Treatment* (74):143-153, 2002.

Keeler, E. The Value of Remaining Lifetime Is Close to Estimated Values of Life, *J Health Economics* (20):141-3, 2001.

Inkeles, MA diCristofaro, B Mcglynn, and E Keeler. Outcome Measurement in HEDIS: Can Risk Adjustment Save the Low Birth Weight Measure? *Health Services Research* 35, December 2000.

Stockdale SE, E. Keeler, N Duan, et al., Costs and Cost-Effectiveness of a Church Based Intervention to Promote Mammography Screening, *Health Services Research* (35):1037-1057, 2000.

Malkin, JD, M.S. Broder, and E. Keeler. Do Longer Post-Partum Stays Reduce Newborn Readmissions? Analysis Using Instrumental Variables, *Health Services Research*. (35):1071-1091, 2000.

95. Malkin, JD, S Garber, MS Broder, E Keeler. Infant Mortality and Early Postpartum Discharge, *Obstetrics and Gynecology*(96):183-188, 2000.

Goldman, Dana, Joan Buchanan, and Emmett Keeler. Simulating the Potential Effects of Medical Savings Accounts on the Insurance Choices of Small Businesses, *Health Services Research*, 53-75, 2000.

Carter GM, Bell RM, Dubois RW, et al., A Clinically Detailed Risk Information System For Cost, *HCFA Review* (21):1-27, Spring 2000.

Gifford DS, Morton SC, Fiske M, Keesey J, Keeler EB, Kahn KL. The Diagnosis of Lack of Progress in Labor as a Reason for Cesarean Delivery, *Obstetrics and Gynecology* 2000, 95:589-595.

Keeler, EB, Robalino DA, Frank JC, et al. Cost Effectiveness of Outpatient Geriatric Assessment with an Intervention to Increase Adherence, *Medical Care* (37):1199-1206, 1999.

90. Sherbourne, CD, E. Keeler, J. Unutzer, et al. Relationship Between Age and Patient Preferences for Their Current Health State, *Gerontologist*. (39):271-288, 1999.

Melnick, G., E.B. Keeler, J. Zwanziger, Market Power and Hospital Pricing: Are Non-Profits Different? *Health Affairs*, May 1999, 167-173.

Keeler, Emmett, Glenn Melnick, and Jack Zwanziger. The Changing Effects of Competition on Non-profit and For-Profit Hospital Pricing Behavior, *J Health Economics* (18):69-86, 1999. included in *Health Economics: Major themes in Health and Social Welfare*, A. Culyer Ed. Routledge 2006.

Keeler, Emmett, Grace Carter, and Joe Newhouse, A Model of the Impact of Reimbursement Schemes on Health Plan Choice, *J Hlth Econ* (17):297-320, 1998.

Reuben D.B., A.A. Moore, M. Damesyn, E. Keeler, G.G. Harrison, and G.A. Greendale, Correlates of Hypoalbuminemia in Community Dwelling Older Persons, *American Journal of Clinical Nutrition*, 66:38-45, 1997.

85. Keeler E.B., R.E. Park, R.M. Bell, D.S. Gifford, and J. Keeseey, Adjusting Cesarean Delivery Rates for Case-Mix, *Health Services Research*, 32:511-528, 1997.

Keeler, Emmett B., and Thomas Fok, Equalizing Physician Fees Had Little Effect on Cesarean Rates, *Medical Care Research and Review*, 53:465-471 Dec 1996.

Keeler, Emmett, Jesse Malkin, Dana Goldman, and Joan Buchanan, Can Medical Savings Accounts for the Nonelderly Reduce Health Care Costs? *J American Medical Association*, 275:1666-71, 1996.

Hays, R.D., A.L. Siu, E. Keeler, et al., Long-Term Care Residents Preferences for Health States on the Quality of Well Being Scale, *Medical Decision Makin.*, 16:254-261, July/September 1996.

Chang, B.L., L.V. Rubenstein, E.B. Keeler, L.N. Miura, and K.L. Kahn, Validity of Nursing Assessment and Monitoring of Signs and Symptoms Scale in ICU and Non-ICU Patients, *American Journal of Critical Care*, 5:298-303, 1996.

80. Siu, A.L., R.L. Kravitz, E.B. Keeler, et al., Post Discharge Geriatric Assessment of the Hospitalized Frail Elderly, *Archives of Internal Medicine*, 156:76-81, 1996.

Schnelle, J.F., E. Keeler, et al., A Cost and Value Analysis of Two Interventions with Incontinent Nursing Home Residents, *Journal of the American Geriatric Society*, 43(10):1112-1117, 1995.

Ferrell, B., E. Keeler, et al., Cost Effectiveness of Low-Air-Loss Beds for Treatment of Pressure Ulcers, *American Journal of Gerontology*, 50A:M141-M146, 1995.

Gifford, D.S., E. Keeler, and K. Kahn, Reductions in Cost and Cesarean Section by Routine Use of External Cephalic Version: A Decision Analysis, *Obstetrics and Gynecology*, 85:930-936, 1995.

Keeler, E., A Model of the Demand for Effective Care, *Journal of Health Economics*, 14:231-238, 1995.

75. Etchason, J., L. Petz, E. Keeler, et al., The Cost Effectiveness of Preoperative Autologous Blood Donations, *New England Journal Medicine*, 332:719-24, 1995.

Kattlove, H., A Liberati, E Keeler, and RH Brook, Benefits and Costs of Screening and Treatment for Early Breast Cancer: Development of a Basic Benefit Package, *JAMA* 273:142-148, 1995.

- Lave, J.R., et al., Costing Medical Care: Using Medicare Administrative Data., *Medical Care*, 32:JS77-89, 1994.
- Morton, Williams, Keeler, et al., Effect of Epidural Analgesia for Labor on Cesarean Delivery, *Obstetrics & Gynecology*, 83:1045-52, 1994.
- Kahn, K., Pearson M et al., Health Care for Black and Poor Hospitalized Medicare Patients, *JAMA* 271:1169-1174, 1994. AHSR Article of the year for 1994.
70. Keeler, E.B., Decision Analysis and Cost-Effectiveness Analysis in Women's Health Care, *Clinical Obstetrics and Gynecology*, 37(1):207-215, March 1994.
- Wells, K.B., et al., Quality of Care for Hospitalized Depressed Elderly Patients Before and After Implementation of the Medicare Prospective Payment System, *American Journal of Psychiatry*, 150(12):1799-1768, December 1993.
- Newhouse, J., W. Manning, E. Keeler, and E. Sloss, Risk Adjustment for a Children's Capitation Rate, *HCFA Review*, 15:39-54, Fall 1993.
- Keeler, E., and M. Brodie, Economic Incentives in the Choice Between Vaginal Delivery and Cesarean Section, *Milbank Memorial Quarterly*, 71:365-404, 1993. Reprinted in *1995 Yearbook of Neonatal and Perinatal Medicine*, Mosby-Year Book Inc.
- Pearson, Marjorie L., et al., Differences in Quality-of-Care for Hospitalized Men and Women, *JAMA*, 268:1883-9, 1992.
65. Keeler, E., L. Rubenstein, and K. Kahn, et al., Hospital Characteristics and Quality of Care, *JAMA*, 268:1709-1714, 1992.
- Carlisle, Siu, Keeler, et al., HMO vs Fee-for-Service Care of Older Persons with Acute Myocardial Infarction, *AJPH* 82:1626-30, 1992.
- Siu, Al, et al., Choosing Quality-of-Care Measures Based on the Expected Impact of Improved Quality-of-Care for the Major Causes of Mortality and Morbidity, *Health Services Research*.
- Keeler, E., and R. Bell, NEW DEALES: Other Approximations of Life Expectancy, *Medical Decision Making*, 12:307-11, 1992. Selected for anthology "Technology Assessment for Radiologists," D Fryback (Ed.), 1994.
- Effects of Cost-Sharing on Use of Medical Services and Health, *Medical Practice Management*, 8:11-25, 1992.
60. Hadorn, D., D. Draper, W.H. Rogers, E.B. Keeler, and R.H. Brook, Cross-Validation Performance of Mortality Prediction Models, *Statistics in Medicine*; 11:475-489, 1992.

Buchanan, J. L., E. B. Keeler, et al., Simulating Health Expenditures under Alternative Insurance Plans, *Management Science*, 37:1067-1090, Sept.1991. (This paper given at 2nd Decennial Conference on Health Economics, Zurich, 1990.)

Kahn, K., et al., The Effects of the DRG-Based Prospective Payment System on Quality of Care for Hospitalized Medicare Patients: An Introduction to the Series, *JAMA*, 264:1953-1955, 1990.

Draper, D., et al., Studying the Effects of the DRG-Based Prospective Payment System on Quality of Care: Design, Sampling, and Fieldwork, *JAMA*, 264:1956-1961, 1990.

Keeler, E., et al., Changes in Sickness at Admission Following the Introduction of the Prospective Payment System, *JAMA*, 264:1962-1968, 1990.

55. Kahn, K., et al., Measuring Quality of Care with Explicit Process Criteria Pre- and Post- Implementation of the DRG-Based Prospective Payment System, *JAMA*, 264:1969-1973, 1990.

K. Kahn, K., and E. Keeler, et al., Comparing Outcomes of Care Pre- and Post-Implementation of the DRG- Based Prospective Payment System, *JAMA*, 264:1984-1988, 1990.

Rogers, W.H., et al., Quality of Care Before and After Implementation of the DRG-Based Prospective Payment System: A Summary of Effects, *JAMA*, 264:1989-1994, 1990.

Park, R. E., et al., Explaining Variations in Hospital Death Rates: Randomness, Severity of Illness, Quality of Care, *JAMA* 264:484-490, 1990.

Brook, R., et al., Quality of Ambulatory Care: Epidemiology and Comparison by Insurance Status and Income, *Medical Care* 28:392-410, May 1990.

50. Keeler , E What Proportion of Hospital Cost Differences Are Justifiable? *Journal of Health Economics*, 9:359-365, 1990.

Wells, K.B., E. B. Keeler, and W. G. Manning, Patterns of Outpatient Mental Health Care Over Time: Some Implications for Estimates of Demand and for Benefit Design, *Health Services Research*, 24:773-789, 1990.

Lurie, N., et al., How Free Health Improved Vision in the Health Insurance Experiment, *American Journal of Public Health* 79:640-642, 1989.

Keeler, E., et al., The External Costs of a Sedentary Lifestyle, *American Journal of Public Health*, 79(8):975-981, Aug 1989.

Manning, W., E. Keeler, et al., The Taxes of Sin: Do Smokers and Drinkers Pay their Way, *Journal of the American Medical Association*, 261:1604-1609, March 17, 1989. AHSR Article of the Year 1989.

45. Newhouse, J., et al., Objective Measures of Health and Prior Utilization as Adjustors for Capitation Rates, *Health Care Financing Review*, 10:41-54, Spring 1989.

Kahn, K., et al., Interpreting Hospital Mortality Data: How Can We Proceed? *Journal of the American Medical Association*, 260:3625-3678, 1988.

Thorpe, K., S. Cretin, and E. Keeler, Are the DRG Case Weights Compressed?, *HCFA Review*, 10:37-46, Winter 1988.

Keeler, K., W. Manning, and K. Wells, The Demand for Episodes of Mental Health Services, *Journal of Health Economics*, 7:369-392, 1988, from RAND R-3432-NIMH, October 1986.

Keeler, E., J. Rolph, The Demand for Episodes of Treatment in the Health Insurance Experiment, *Journal of Health Economics*, 7:337-367, 1988, from RAND R-3454-HHS.

40. Keeler, E., G. Carter, and S. Trude, Insurance Aspects of DRG Outlier Payments, *Journal of Health Economics*, 7:193-214, 1988. AHSR Article of the Year, 1988.

Keeler, E., Shan Cretin, Uses of Cost-Benefit Analysis, (Editorial) *Journal of Health Economics*, 6(3):275-278, 1987.

Manning, W.G., et al., Health Insurance and the Demand for Medical Care: Evidence from a Randomized Experiment, *American Economic Review*, 77(3), June 1987. Also RAND R-3476-HHS.

Keeler, E., et al., Effects of Cost Sharing on Physiological Health, Health Practices, and Worry, *Health Services Research*, 279-306, August 1987. Also RAND N-2699-HHS.

Sloss, E., et al., Effects of a Health Maintenance Organization on Physiologic Health: Results from a Randomized Trial, *Annals of Internal Medicine*, 106(1):130-138, January 1987. Also RAND R-3526-HHS.

35. Lohr, K., et al., Chronic Disease in a General Adult Population: Findings from the RAND HIE, *Western Journal of Medicine*, 145:537-547, October 1986. Also RAND R-2262/1-HHS.

Keeler, E., K.B. Wells, and W. Manning, Markov and Other Models of Episodes of Mental Health Treatment, In *Advances in Health Services Research and Health Economics*, 8:279-298, JAI Press, 1987.

Newhouse, J., et al., The Findings of the RAND Health Insurance Experiment—A Response to Welch et al., *Medical Care*, 25:157-179, February 1987.

Ware, J., et al., How Do Health Outcomes at an HMO Compare With Those of Fee-for-Service Care, *Lancet*, May 3, 1986. Also RAND R-3459-HHS.

Valdez, R., et al., Health Insurance, Medical Care, and Children's Health, *Pediatrics*, 77(1):124-128, January 1986.

30 Valdez, R., et al., The Consequences of Cost Sharing for Children's Health, *Pediatrics*, 75:952-961, 1985.

Leibowitz, A., et al., The Effects of Cost Sharing on the Use of Medical Services by Children, *Pediatrics*, 75:942-951, 1985. Also RAND R-3287-HHS.

Keeler, E., R. Brook, et al., How Free Care Reduced Hypertension in the Health Insurance Experiment, *JAMA*, October 11, 1985. Also RAND R-3326-HHS.

Brook, R., et al., Does Free Care Improve Adults Health? Results from a Randomized Clinical Trial, *New England Journal of Medicine*, December 8, 1983. Also RAND R-3055-HHS.

Keeler, E., and J. E. Rolph, How Cost Sharing Reduced Medical Spending of Participants in the Health Insurance Experiment, *JAMA*, April 22, 1983.

25. Keeler, E., and S. Cretin, Discounting of Life-Saving and Other Nonmonetary Effects, *Management Science*, 29:300-306, March 1983. Selected for anthology "Technology Assessment for Radiologists," D Fryback (Ed.).

Kane, R.L., et al., Predicting the Outcomes of Nursing-Home Patients, *The Gerontologist*, February 1983.

Keeler, E., Probability Illusions, *Bridge World*, January 1983.

Keeler, E., D. Solomon, et al., Effects of Patient Age on Duration of Medical Encounters with Physicians, *Medical Care*, November 1982.

Van Herle, A. J., et al., The Thyroid Module, *Annals of Internal Medicine*, 96(2):221-232, February 1982.

20. Keeler, E., R. Kane, D. Solomon, Short- and Long-Term Residents of Nursing Homes, *Medical Care*, XIX(3), March 1981.

Berwick, D., S. Cretin, and E. Keeler, Cholesterol, Children, and Heart Disease, *Pediatrics*, November 1981.

Newhouse, J. P., et al., Some Interim Results from a Controlled Trial in Health Insurance, *New England Journal of Medicine*, December 17, 1981. Also RAND R-2847-HHS, October 1980.

Manning, W.G., et al., A Two-Part Model of the Demand for Medical Care, In J. van der Gagg and M. Perlman (Eds.), *Health, Economics, and Health Economics*, Proceedings of the World Congress on Health Economics, North Holland Publishing Co., 1981, 103-124.

Kane, R. L., et al., The Future Need for Geriatric Manpower in the United States, *New England Journal of Medicine*, June 1980. Reprinted in A. R. Somers and D. R. Fabian (Eds.) *The Geriatric Imperative: An Introduction to Gerontology and Clinical Geriatrics*, New York: Appleton-Century Crofts, 1981; and in *Generations*, 1981.

15. Kisch, A et al., Introduction to Algorithms for Health Planners, *Medical Care*, December 1978, an abridged version of RAND R-2215/1-HEW, August 1977.

E. Keeler, E., J. Rolph, and D. Relles, Family and Individual Deductibles, *Inquiry*, September 1977, the empirical part of RAND R-1393-OEO/HEW; Reprinted in *Financing of Health Care*, Health Administration Press, 1979.

Keeler, E., et al., The Choice between Family and Individual Deductibles, some theorems in the *Journal of Economic Theory*, December 1977.

Keeler, E., J. Newhouse, and C. Phelps, Deductibles and the Demand for Medical Services: The Theory of a Consumer Facing a Variable Price Schedule Under Uncertainty, *Econometrica*, August 1977.

Keeler, E., D. Morrow, and J. Newhouse, The Demand for Supplementary Health Insurance, or Do Deductibles Matter?, *Journal of Political Economy*, August 1977.

10. Keeler, E., and D. Berwick, Effects of Pooled Samples, *Health Laboratory Science*, April 1976.

Berwick, D., S. Cretin, and E. Keeler, Screening for Cholesterol: Costs and Benefits, In H. A. Lubs and F. Delacruz (Eds.), *Genetic Counseling*, 1976.

McNeil, B., E. Keeler, S. J. Adelstein, Primer on Certain Elements of Medical Decisionmaking, *New England J. Med.*, 293:211-215, 1975.

Golubitsky, M., E. Keeler, and M. Rothschild, Convergence of the Age Structure, *Theoretical Population Biology*, February 1975, 84-93.

Keeler, E., Horizon in a Simple Model of Economic Growth, *Econometrica*, March 1974.

5. Keeler, E., M. Spence, and R. Zeckhauser, Optimal Control of Pollution, *Journal of Economic Theory*, February 1972. Japanese translation in *Kosoku-Doro To Jidosha*, 1979.

Keeler, E., A Twisted Turnpike, *International Economic Review*, February 1972. Also in contributions to the Von Neumann Growth Model, Bruckmann ed., Springer Verlag, 1971

Zeckhauser, R., E. Keeler, Another Type of Risk Aversion, *Econometrica*, September 1970.

Meir, A., and E. Keeler, A Theorem on Contraction Mapping, *Journal of Mathematical Analysis and Applications*, November 1969.

Keeler, E., and J. Spencer, *Proper Raising Points in a Generalization of Backgammon*, The RAND Corporation, P-4078, May 1969; a revised version in *Operations Research*, November 1975. Further work in *Popular Bridge*, June 1977 and *Backgammon Guide*, Winter 1980.

OTHER

Preschool Vision Screening: Summary of a Task Force Report, T.E. Hartmann, V. Dobson, and L. Hainline on behalf of the NEI taskforce on vision screening in the preschool child (I was the economist on the taskforce), *Pediatrics*, 106: 1105-1112, November 2000.

NIH Consensus Statement on Antenatal Corticosteroids Revisited: Repeated Courses, August 2000.

Keynote talk: "Better or Worse Outcomes: Can We Use Them to Measure Quality?" Conference on Achieving Accountability in Health Care, University of Iowa, September 1995.

Decision Trees and Markov Models in Cost Effectiveness Research, 1994. (Chapter 9 in Frank Sloan, (Ed.) *Valuing Health Care*, Cambridge University Press, 1995).

NIH Consensus Statement on Effect of Corticosteroids for Fetal Maturation on Perinatal Outcomes, *JAMA*, 273:413-418, 1995. I was a panel member.

Keeler, E., Using Episodes of Care in Effectiveness Research, U.S. Department of Health and Human Services, *Medical Effectiveness Research Data Methods*, Summary Report, July 1992.

Measuring the Quality of Nursing Surveillance Activities for Five Diseases Before and After Implementation of the DEG-Based Prospective Payment System, L. V. Rubenstein, B. L. Chang, E. B. Keeler, K. L. Kahn. *Patient Outcomes Research: Examining the Effectiveness of Nursing Practice*, Conference Proceedings by the National Center for Nursing Research, September 11-13, 1991.

Keeler, E. B., and S. Cretin, A Comparison of Three Methods of Estimating Spending: Lessons from Phase I; Yang, Fan, Liu, Keeler, and Pan, "Design and Results of Household Survey," Chapters In *Research on Rural Health Insurance*, a Chinese book, 1990.

Newhouse, J., and E. Keeler, Make Drinkers Pay the Social Costs of Imbibing, *Los Angeles Times*, April 30, 1989, OpEd Article.

Keeler, E., and R. L. Kane, What Is Special About Long-Term Care, In R. L. Kane and R. A. Kane (Eds.) *Values and Long-Term Care*, Lexington, Massachusetts: D. C. Heath, 1982.

Review of "Market Signaling," by M. Spence, *Journal of Political Economy*, February 1976.

The Value of a Diagnostic Test, The RAND Corporation, P-5603; invited talk for the Society for Nuclear Medicine, January 1976.

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