

MASTER OF SCIENCE
GRADUATE PROGRAM
HEALTH SERVICES RESEARCH
STANFORD UNIVERSITY



Information and Guidelines

PROGRAM SUMMARY

Program of Study	The Health Services Research master's degree is a research-oriented program that focuses on economics and statistics, outcomes research, cost-effectiveness, and technology assessment.	
Research Facilities	Students may work on a wide variety of research projects with faculty at Stanford and at other nearby institutions. Stanford offers state-of-the-art library and computer facilities.	
Financial Aid	Prospective students are encouraged to seek funding through clinical training programs and research assistantships or career development awards and similar funding from the National Institutes of Health and professional organizations.	
Cost of Study	Tuition for 2008-09 is \$12,010 per quarter. The 8-10 unit rate is \$7810 per quarter.	
Cost of Living	A variety of on-campus and off-campus housing options are available. In general, on-campus housing is more affordable than off-campus housing.	
Student Group	Stanford University has a total enrollment of nearly 15,000, including 8,200 graduate students. Health Services Research students have numerous opportunities to meet students in other departments and programs.	
Location	Stanford University is located in the San Francisco Bay area, 40 miles south of San Francisco and the Pacific Ocean. The campus is within two hours of the Monterey Peninsula, including Carmel and Pacific Grove, and within four hours of the Sierra Nevada, which features excellent skiing and hiking. San Francisco Bay and the foothills of the Santa Cruz mountains, which provide opportunities for biking, and hiking year-round, are also just a few minutes away.	
The University	Stanford is a private university founded in 1885 by Leland and Jane Stanford in memory of their only son, Leland Stanford Jr. The 8,000 acre campus stretches from the city of Palo Alto westward into the foothills. Stanford has an ongoing commitment to the excellence of its programs.	
Applying	Applications are evaluated based on the applicant's commitment to, and aptitude for, a career in health services research as described in his/her statement of purpose, relevant work and research experience, and letters of recommendation. The Medical College Admission Test (MCAT) may be substituted for the Graduate Record Examination (GRE) requirement for MDs or Medical students. Applicants from non-English speaking countries should provide evidence of competence in English on the Test of English as a Foreign Language (TOEFL). We consider applications throughout the year, but encourage applicants to submit complete applications no later than the end of January. Apply online at gradadmissions.stanford.edu under "applying".	
Correspondence and Information	<p><i>For further information please contact:</i> Educational Coordinator Department of Health Research & Policy Stanford University School of Medicine Stanford, California 94305-5405 Telephone: (650) 723-5456 FAX: (650) 725-6951 Email: hsr-program@med.stanford.edu http://med.stanford.edu/mshsr/</p>	<p><i>For application forms and information:</i> Graduate Admissions Office 630 Serra St., Suite 120 Stanford University Stanford, California 94305-6032 Telephone: (650) 723-4291 http://gradadmissions.stanford.edu</p>

GRADUATE INTERDISCIPLINARY PROGRAM IN HEALTH SERVICES RESEARCH

Health Services Research is an interdisciplinary field that focuses upon the organization, financing, delivery and outcomes of health care.

The Health Services Research master's degree is designed to complement training in the medical and social sciences fields and prepare students for research careers in health services or health policy analysis. The program provides specialized training in selected areas of health care policy, research methodology, and the application of these skills to a specific research problem. Course work requirements allow students to design a program of study suited to their individual backgrounds and interests.

Admission Criteria

A successful applicant for admission to the M.S. program is expected to have a strong academic record, high Graduate Record Examination (GRE) scores obtained within the past five years, strong letters of recommendation, and an appropriate personal statement of purpose.

Applicants who are currently medical students or MD post-doctoral fellows at the Stanford School of Medicine are also considered. The Medical College Admission Test (MCAT) may be substituted for the Graduate Record Examination (GRE) requirement for applicants with a M.D. or D.O. degree and for those currently enrolled in the M.D. program at Stanford University.

Applicants from other countries whose first language is not English and who have received fewer than two years of English-based education will be required to submit TOEFL scores as evidence of English proficiency. Scores of at least 600 for the paper-based TOEFL exam or 250-300 for the computer based TOEFL exam are required.

Number of Units Required and Length of Study

All candidates for the M.S. degree must satisfactorily complete 45 units of graduate course work, including a master's thesis.

The M.S. program is typically completed in two years. The maximum length of study for the M.S. degree is three years, which may be extended by one year through petition.

Course Requirements for the M.S. Degree

General requirements for the M.S. Degree are described in the *Stanford Bulletin*. A total of 45 units are required, including 27 course units, HRP 283 (Research in Progress Seminar), HRP 299 (Directed Reading), and HRP 399 (Research). Transfer credit is not accepted for the M.S. degree.

1. At least eight units from: HRP 256, HRP 391, HRP 392
2. At least six units from approved statistics courses at the 200 level or above: HRP 261, HRP 262
3. At least three units from: HRP 283
4. Directed Reading and Master's Thesis: HRP 299, HRP 399

To maintain minimum progress toward the degree, students who have not been granted Terminal Graduate Registration status are required to enroll in at least 8 units each quarter, except summer quarter.

Mentoring, Advising, and Evaluation of Performance

Each student will be assigned a faculty advisor from the core faculty. The faculty advisor generally serves as the student's mentor for the master's project. Depending on the topic of the project, additional faculty members may serve as co-mentors. Affiliated faculty may serve as co-mentors on specific research methods, and other medical school faculty often serve as "content experts" for projects concerned with specific diseases or medical treatments.

Application Information and Registration Policies and Procedures

Application information is available at the following address: Graduate Admissions Office, 630 Serra St., Suite 120, Stanford University, Stanford, CA 94305-6032; Telephone and email address are: (650) 723-4291, gradadmissions@stanford.edu. Complete application information and instructions are found at: <http://gradadmissions.stanford.edu/>

The Stanford Bulletin

The *Bulletin* may be accessed via the Internet at <http://www.stanford.edu/dept/registrar/bulletin/>. The *Stanford Bulletin* may also be purchased from the Stanford Bookstore. To receive the Bulletin via UPS (U.S. only), send a check or money order that includes \$8.00 for the bulletin plus \$5.95 for shipping and calculate the sales tax for your respective state. For California residents, the total is \$14.61. Send requests to Stanford Bookstore, 519 Lausen Plaza, Stanford, California 94305-3079. A check or money order should be made in U.S. funds and made payable to the Stanford bookstore. Prices are subject to change.

The Stanford School of Medicine Catalog

The Catalog may be accessed via the Internet at <http://medcatalog.stanford.edu/>. Other information on the School of Medicine is available at the following address: Office of Student Affairs, School of Medicine, Stanford University, Stanford, CA 94305.

Funding of Graduate Study

Loan support is available from Stanford University, as detailed in the Stanford University Guide to Graduate Admission. Financial assistance for graduate study may be available in the form of research or teaching assistantships.

Fellows anticipating careers in clinical translational research may be eligible for KL2 (formerly K12) funding through the SCCTER Clinical and Translational Science Award. Availability of KL2 funding is limited, but selected scholars receive full tuition support and a small research allowance; stipend support may be available. Medical students may apply for tuition and stipend support through SCCTER TL1 (formerly T32) funding. Information on KL2 and TL1 awards are available from the Health Research and Policy educational coordinator at hsr-program@med.stanford.edu or (650) 723-5456.

Several student positions are supported by a training grant in health services research. A separate application is required through the Center for Primary Care and Outcomes Research (PCOR). See <http://healthpolicy.stanford.edu/fellowships/> for information.

CORE REQUIREMENTS FOR HEALTH SERVICES RESEARCH

At least eight units from the following:		
HRP 256	Economics of Health and Medical Care	Institutional, theoretical, and empirical analysis of the problems of health and medical care. Topics: institutions in the health sector; measurement and valuation of health; nonmedical determinants of health; medical technology and technology assessment; demand for medical care and medical insurance; physicians, hospitals, and managed care; international comparisons. Prerequisite: ECON 50 and 102A or equivalent statistics, or consent of instructor. Recommended: ECON 51. (Bhattacharya) 5 units, Autumn. (Same as BIOMEDIN 256, ECON 126, HRP 256.)
HRP 391	Political Economy of Health Care in the United States	Economic tools and institutional and legal background to understand how markets for health care products and services work. Moral hazard and adverse selection. Institutional organization of the health care sector. Hospital and physician services markets, integrated delivery systems, managed care, and pharmaceutical and medical device industries. Public policy issues in health care, medical ethics, regulation of managed care, patients' bill of rights, regulation of pharmaceuticals, Medicare reform, universal health insurance, and coverage of the uninsured. International perspectives; how other countries' health care systems evolved, and what the U.S. can learn from their experiences. (Kessler, Bundorf) 4 units, Spring. (Same as BIOMEDIN 156, BIOMEDIN 256, ECON 126)
HRP 392	Analysis of Costs, Risks, and Benefits of Health Care	Principal evaluative techniques for health care, including utility assessment, cost-effectiveness analysis, cost-benefit analysis, and decision analysis. Emphasis is on practical application with major effort devoted to a group project presented at the end of the quarter. Guest lectures by experts from the School of Medicine, pharmaceutical industry, health care plans, and government. (Garber, Owens) 4 units, Autumn.
At least six units of approved statistics courses at the 200 level or above. Students without prior training in statistics are strongly encouraged to enroll in Statistics 141 prior to enrolling in HRP 261, 262. Highly recommended sequence includes:		
HRP 261	Intermediate Biostatistics: Analysis of Discrete Data	The 2x2 table. Chi-square test. Fisher's exact test. Odds ratios. Sampling plans; case control and cohort studies. Series of 2x2 tables. Mantel-Haenszel. kxm tables. Matched data logistic models. Conditional logistic analysis with application to case-control data. Log-linear models. Generalized estimating equations for longitudinal data. Cell phones and car crashes – the case cross-over design. Special topics: Generalized additive models, classification trees, bootstrap inference. (Sainani) 3 units, Winter (same as STATS 261)

HRP 262	Intermediate Biostatistics: Regression, Prediction, Survival Analysis	Methods for analyzing longitudinal data. Topics include: Kaplan-Meier methods, Cox regression, hazard ratios, time-dependent variables, longitudinal data structures, profile plots, missing data, modeling change, MANOVA, repeated-measures ANOVA, GEE, and mixed models. Emphasis is on practical applications. Prerequisites: basic ANOVA and linear regression. (Sainani) 3 units, Spring. (Same as STATS 262)
At least three units:		
HRP 283	Health Research Services Core Seminar	Presentation of research in progress and tutorials. Three units are required. (Core Faculty) 1 unit, Autumn, Winter, Spring.
Master's thesis and Directed Reading		
HRP 299	Directed Reading	Aspects of preventive medicine, public health, social aspects of disease and health, economics of medical care, occupational or environmental medicine, epidemiology, international health, or related fields. Prerequisite: consent of instructor. (Staff) 1-18 units, Autumn, Winter, Spring, Summer
HRP 399	Research (Thesis)	Qualified students undertake investigations sponsored by individual faculty members. A total of at least 15 units of thesis research must be taken over at least two quarters. (Staff)

Stanford Health Research and Policy building



APPROVED ELECTIVES

Electives may be used to fulfill the 45 unit requirement. Approved electives are listed below. Please note that some courses are not offered every year. Other courses may be taken as electives, but these require permission of the student's Academic Advisor.

HRP 209	FDA'S Regulation of Health Care	First of two-course sequence; may be taken separately or in any order. The American health care system and its legal and policy problems. Topics: special characteristics of medical care compared to other goods and services, difficulties of assuring quality care, complex patchwork of the financing system, and ethical problems the system raises. (Greely) 3 quarter units, not offered 2008-2009. (Note: The Law School uses a different calendar than the rest of the University.) (Same as Law 458)
HRP 210	Health Law and Policy I	Introduction to the American health care system and its legal and policy problems. Topics: special characteristics of medical care as compared with other goods and services, difficulties of assuring quality care, the complex patchwork of the financing system, and ethical problems the system raises. (Greely) 3 quarter units, alternate years, not given this year. (Note: The Law School uses a different calendar than the rest of the University.) (Same as LAW 313)
HRP 211	Law and the Biosciences: Neuroscience	Legal, social, and ethical issues arising from advances in neuroscience, including effects upon law and society through improvements in predicting illnesses and behaviors, reading minds through neuroimaging, understanding responsibility and consciousness, treating criminal behavior, and cognitive enhancement. (Greely) 3 quarter units, Winter <u>semester</u> . (Note: The Law School uses a different calendar than the rest of the University.) (Same as Law 368)
HRP 212	Crosscultural Medicine	Interviewing and behavioral skills to facilitate culturally relevant health care across all population groups. Explicit and implicit cultural influences operating in formal and informal medical contexts. (Corso) 3 units, Spring.
HRP 214	Scientific Writing	Step-by-step through the process of writing and publishing a scientific manuscript. How to write effectively, concisely, and clearly. Preparation of an actual scientific manuscript. Students are encouraged to bring a manuscript on which they are currently working to develop and polish throughout the course. (Sainani) 2-3 units, Winter.
HRP 216	Analytical and Practical Issues in the Conduct of Clinical and Epidemiologic Research	Topics include: advanced aspects of study design and data analyses; development of health measurement instruments; methods of summarizing literature and quantifying effect sizes; and understanding the multivariable nature of health events in human populations. 3 units requires a term paper in addition to regular assignments. Prerequisites: HRP 225, and HRP 258 or 259, or consent of instructor. (Popat) 2-3 units, offered every other year, not offered 2008-2009.

HRP 220	Health Law and Policy II	Second of two-course sequence. This class will focus on ethical issues and on public health. Specific issues will include end of life, reproductive rights, research ethics, food and drug administration, and public health law. The class is open to law or medical students, and to graduate students from other parts of the University by consent of the instructor. Completion of Health Law and Policy I is recommended but not required. (Greely) 3 semester units, <i>not offered 2008-2009</i> . (Note: The Law School uses a different calendar than the rest of the University.) (Same as Law 314)
HRP 223	Epidemiologic Analysis: Data Management and Statistical Programming	Skills for management and analysis of biomedical data. Topics include importing and exporting data from multiple database systems, visualizing and cleaning data, data management for multicenter projects, and data security. Introduction to applied statistical programming relevant to epidemiologic and clinical research. No previous programming experience required. (Balise) 2-3 units, Autumn.
HRP 225	Design and Conduct of Clinical and Epidemiologic Studies	Intermediate-level. The skills to design, carry out, and interpret epidemiologic studies, particularly of chronic diseases. Topics: epidemiologic concepts, sources of data, cohort studies, case-control studies, cross-sectional studies, sampling, estimating sample size, questionnaire design, and the effects of measurement error. (Popat) 3-4 units, Autumn.
HRP 226	Advanced Epidemiologic and Clinical Methods	The principles of measurement, measures of effect, confounding, effect modification, and strategies for minimizing bias in epidemiologic studies. Prerequisite: 225 or consent of instructor. (Nelson) 3-4 units, Winter.
HRP 230	Cancer Epidemiology	Descriptive epidemiology and sources of incidence/ mortality data; biological basis of carcinogenesis and implications for epidemiologic research; methodological issues relevant to cancer research; causal inference; major environmental risk factors; genetic susceptibility; cancer control, examples of current research; critique of literature. Prerequisite: HRP 225, or instructor consent. (West) 2-3 units, offered every other year, not offered 2008-2009.
HRP 239	Understanding Statistical Models and their Social Science Applications	Information that statistical modeling can provide in experimental and non-experimental settings emphasizing misconceptions in social science applications such as causal modeling. Prerequisite: intermediate-level statistical methods including multiple regression, logistic regression, and log-linear models. (Rogosa) 3 units, Winter. (Same as EDUC 260x, STATS 209)
HRP 251	Design and Conduct of Clinical Trials	The rationale for Phase 1-3 clinical trials, recruitment of subjects, techniques for randomization, data collection and endpoints, and reporting of results. Emphasis includes theoretical underpinnings of clinical research and practical aspects of conducting clinical trials. (Henderson, Lavori) 3 units, Spring.
HRP 252	Outcomes Analysis	Introduction to methods of conducting empirical studies of large existing medical, survey, and other databases to ask clinical and policy questions. Econometric and statistical models used to conduct medical outcomes research. How research is conducted on medical and health economics questions when a randomized trial is impossible. Problem sets emphasize hands-on data analysis and methods application, including re-analyses of well-known studies. (Bhattacharya) 3 units, Spring. (same as BIOMEDIN 251)

HRP 351	Innovation and Management in Health Care	The workings of the major institutions such as hospitals, health insurance companies, HMOs, Medicare and Medicaid, federal regulators, and the medical establishment. National health expenditures and alternative models for healthcare financing and delivery. Trends in treatment innovations provided by biopharmaceuticals, medical devices, and surgical procedures; delivery innovations facilitated by information systems and new processes. Policy and business challenges raised by these innovations and the health care ecosystems they promote. (Chess, Zenios) 4 units, Winter. (Same as GSBGEN 351)
EDUC 251C	Statistical Analysis in Educational Research: Multivariate Analysis	Advanced regression methods. Multivariate analysis of variance, discriminant analysis, factor analysis, correlation analysis. Data compression: principle components analysis, clustering, multi-dimensional scaling, latent structure models, structural equation models. Intensive use of computer packages. (Olkin) 1-4 units, <i>not offered 2008-2009</i> .
MS&E 252	Decision Analysis I: Foundations of Decision Analysis	Coherent approach to decision making, using the metaphor of developing a structured conversation having desirable properties, and producing actional thought that leads to clarity of action. Socratic instruction; computational problem sessions. Emphasis is on creation of distinctions, representation of uncertainty by probability, development of alternatives, specification of preference, and the role of these elements in creating a normative approach to decisions. Information gathering opportunities in terms of a value measure. Relevance and decision diagrams to represent inference and decision. Principles are applied to decisions in business, technology, law, and medicine. See 352 for continuation (Howard) 3-4 units, Autumn.
MS&E 292	Health Policy Modeling	Primarily for master's students; also open to undergraduates and doctoral students. The application of mathematical, statistical, economic, and systems models to problems in health policy. Areas include: disease screening, prevention, and treatment; assessment of new technologies; bioterrorism response; and drug control policies. (Brandeau) 3 units, Winter.
MS&E 352	Decision Analysis II: Professional Decision Analysis	How to organize the decision conversation, the role of the decision analysis cycle and the model sequence, assessing the quality of decisions, framing decisions, the decision hierarchy, strategy tables for alternative development, creating spare and effective decision diagrams, biases in assessment, knowledge maps, uncertainty about probability. Sensitivity analysis, approximations, value of revelation, joint information, options, flexibility, bidding, assessing and using corporate risk attitude, risk sharing and scaling, and decisions involving health and safety. See 353 for continuation. Prerequisite: 252 (Howard) 3-4 units, Winter.
Stats 211	Topics in Quantitative Methods: Meta-Analysis	Meta-analysis as a quantitative method for combining the results of independent studies enabling researchers to evaluate available evidence. Examples of meta-analysis in medicine, education, and social and behavioral sciences. Statistical methods include nonparametric methods, contingency tables, regression and analysis of variance, and Bayesian methods. Project involving an existing published meta-analysis. Prerequisite: basic sequence in statistics. (Olkin) 1-3 units, Winter.

SAMPLE PROGRAM PLAN FOR THE M.S. DEGREE

Course number	Course Title	Units
<u>First Quarter: Autumn</u>		
HRP 256 [†]	Economics of Health and Medical Care	5
HRP 283 [†]	Research in Progress Seminar	1
HRP 392 [†]	Cost-Benefit Analysis in Health Care	4
	Total for Autumn Quarter	10
<u>Second Quarter: Winter</u>		
HRP 261 [†]	Intermediate Biostatistics: Analysis of Discrete Data	3
HRP 283 [†]	Research in Progress Seminar	1
HRP 351*	Health Care Technology: From Innovators to Providers to Patients	4
HRP 299	Directed Reading	1
	Total for Winter Quarter	9
<u>Third Quarter: Spring</u>		
HRP 262 [†]	Intermediate Biostatistics: Regression, Prediction, Survival Analysis	3
HRP 283 [†]	Research in Progress Seminar	1
HRP 252*	Outcomes Analysis	3
HRP 391 [†]	Political Economy of Health Care in the U.S.	4
	Total for Spring Quarter	11
<u>Fourth Quarter: Autumn</u>		
HRP 209*	FDA's Regulation of Health Care	2
HRP 399	Research (Master's Thesis)	6
	Total for Autumn Quarter	8
<u>Fifth Quarter: Winter</u>		
HRP 399	Research (Master's Thesis)	8
Total units		46
[†] Indicates core requirement * Indicates elective course ** Students without prior training in statistics are strongly encouraged to enroll in STAT 141 (Autumn, 4-5 units) prior to enrolling in HRP 261 and 262.		

MASTER'S THESIS

Nature of the Master's Thesis: The completion of a master's thesis is an essential component of the M.S. program in Health Services Research. The thesis allows students to apply methodologic principles to specific issues in health or medical care, and to demonstrate the following:

- Familiarity with health care organization, financing, and policy issues
- Ability to communicate scientific reasoning and argue analytically
- Awareness of technical, methodological, and other issues relevant to health services research.
- Comprehension of statistical techniques, their proper use, and limitations
- Knowledge in a substantive area of health services

The thesis is typically 30–50 pages long, double-spaced, including tables, figures, and references. Each thesis must include a summary abstract of approximately 400 to 1000 words. The thesis may take one of several forms, such as:

- Original analysis of data, whether collected primarily for the thesis or as secondary data analysis
- A comprehensive literature review with a meta-analysis of data or a critical reanalysis of data
- Evaluation of a methodological problem using real or hypothetical data
- A decision model or cost-effectiveness analysis

The quality of the master's thesis should be such that it can be converted into a manuscript for publication or a credible research grant application, and students are strongly encouraged to do so. Students are expected to present their research findings during a session of HRP 283, the Health Services Research Seminar.

Thesis Committee: Each student's Masters Thesis Committee is composed of at least two faculty members, a core faculty member and a co-reader. The core faculty member is generally the student's advisor, and the co-reader is typically either the student's methodology mentor, or clinical domain expert, or the director of the HSR program. The student's advisor generally serves as the primary supervisor of the thesis research. Students may propose additional members of the Master's Thesis Committee, who are usually members of the Stanford professoriate.

Completion of the master's thesis involves registration for master's thesis research units over a period of two or more quarters. A proposal for the thesis must be submitted to thesis readers when the project is early in its conceptual stages, prior to completing a substantial amount of thesis work. The purpose is for the student to obtain guidance from the thesis committee about specific aims, study design features, and analytic methods before commencing on the project.

FACULTY AND ACADEMIC TEACHING STAFF

The Health Services Research Faculty are associated with many departments and schools in the University. The disciplines represented include biostatistics, business, economics, engineering, epidemiology, ethics, humanities and sciences, international health, medicine, psychology, public policy analysis, law and sociology.

Faculty research interests include the social, organizational, and financial factors in health care delivery, cost-effectiveness of clinical practices, and outcomes research, health economics, health care organization, quality of care, decision analysis, clinical guidelines and assessment of patient preferences and quality of life.

CORE FACULTY SERVING AS STUDENT MENTORS

Members of the Steering Committee are core Health Services Research faculty who serve as Methodology Mentors and Academic Advisors. Some Steering Committee faculty also serve as Research Mentors and teach core courses.

Laurence Baker, PhD. Professor of Health Research & Policy (Health Services Research)
Research interests: Health economics, especially the effects of financial incentives, organizational structures, and government policies on the health care delivery system, health care costs, and health outcomes.

Jay Bhattacharya, MD, PhD. Associate Professor of Medicine (Center for Primary Care and Outcomes Research) and by courtesy in Health Research and Policy and Economics
Research interests: Constraints that vulnerable populations face in making decisions that affect their health status and the effects of government policies and programs designed to benefit vulnerable populations.

M. Kate Bundorf, PhD. Assistant Professor of Health Research & Policy
Research interests: Health insurance markets including the determinants and effects of individual and purchaser choices, the effects of regulation in insurance markets, the interaction of public and private systems of health insurance, incentives for insurers to improve health care quality.

Alan Garber, MD, PhD. Henry J. Kaiser Jr. Professor, Professor of Medicine (Center for Primary Care and Outcomes Research), Director, Center for Primary Care and Outcomes Research and Director, Center for Health Policy
Research interests: Health economics of aging, health insurance, comparative health policy, health care financing and delivery, technology assessment, and health care productivity in the United States and other wealthy nations.

Mary Kane Goldstein, MD, MS. Professor of Medicine (Center for Primary Care and Outcomes Research) and, by courtesy, of Health Research and Policy
Research interests: Health services research in primary care and geriatrics, implementation research for quality improvement using automated decision support provided to clinicians with information individualized for their patients, and utility assessment for cost-effectiveness analysis.

Michael Gould, MD, MS. Associate Professor of Medicine (Pulmonary and Critical Care) and, by courtesy, of Health Research and Policy

Research interests: Technology assessment and quality of care in thoracic oncology, critical care and pulmonary medicine; cost-effectiveness analysis, meta-analysis, prognostic modeling, and measurement of health-related quality of life.

Paul Heidenreich, MD, MS. Associate Professor of Medicine (Cardiovascular Medicine)

Research interests: Cost-effectiveness of new cardiovascular technologies, interventions to improve the quality of care of patients with heart disease, outcomes research using existing clinical and administrative datasets, and use of echocardiography to predict prognosis.

Mark A. Hlatky, MD. Professor of Health Research & Policy and Professor of Medicine (Cardiovascular Medicine)

Research interests: Cardiovascular health services research, cost-effectiveness analyses, and clinical outcomes research.

Grant Miller, MD. Assistant Professor of Medicine (Center for Primary Care and Outcomes Research) and, by courtesy, of Economics and HRP

Research interests: Health improvement in developing countries, the economic returns to health, behavioral responses to disease.

Douglas Owens, MD, MS. Professor of Medicine (General Internal Medicine) and, by courtesy, of Health Research and Policy

Research interests: Decision analysis, cost-effectiveness analysis, and meta-analysis to evaluate clinical and health policy problems.

Paul Wise, MD, MPH. Richard E. Behrman Professor of Child Health and Society

Research interests: Health policy and outcomes research focused on children's health.

AFFILIATED FACULTY

Raymond R. Balise, PhD. Lecturer, Health Research & Policy (Epidemiology)

Research interests: Statistical analysis, programming methods, and cancer epidemiology.

Margaret Brandeau, PhD. Professor of Management Science and Engineering

Research interests: Application of mathematical models and management science techniques to health policy problems; policies for HIV screening and intervention.

Marc Coram, PhD, MS. Assistant Professor Health Research & Policy - Biostatistics

Research interests: Methods to utilize/ identify latent structure in high-dimensional data.

Bradley Efron, PhD. Max H. Stein Professor of Humanities & Science; Professor of Statistics and of Health Research & Policy

Research interests: Statistical inference in biostatistical data; bootstrap methodology.

Alain Enthoven, PhD. Marriner S. Eccles Professor of Public and Private Management (Emeritus)

Research interests: Financing and delivery of health care in the United States and other industrialized nations, and cost-benefit decisions in health care.

Victor Fuchs, PhD. Henry J. Kaiser Jr. Professor (Emeritus); Professor of Economics and of Health Research & Policy (Emeritus)

Research interests: Universal health coverage, factors determining healthcare spending, and determinants of health.

Jeremy Goldhaber-Fiebert, PhD. Assistant Professor of Medicine (Primary Care & Outcomes Research)

Research interests: Decision science and cost-effectiveness analysis to consider the health, cost, and distributional implications of alternative policies; Simulation modeling for both infectious and non-communicable diseases in developing and developed countries; Behavioral economic approaches to individual behavior (e.g., patient adherence) in response to various policies.

Jeffrey B. Gould, MD, MPH. Robert L. Hess Professor in Pediatrics

Research interests: Epidemiology of perinatal morbidity; health outcomes research.

Henry T. Greely, J.D. Deane and Kate Edelman Johnson Professor, School of Law

Research interests: Legal, ethical, and social frontiers of bioscience.

Trevor Hastie, PhD. Professor of Statistics and of Health Research & Policy

Research interests: Flexible statistical modeling, data mining, bioinformatics, and statistical computing.

Iain Johnstone, PhD. Marjorie Mhoon Fair Professor in Quantitative Science; Professor of Health Research and Policy (Biostatistics)

Research interests: Statistical decision theory and wavelet-like methods in estimation theory, asymptotics and application areas, simulation methodology, volume tests of significance, hazard rate estimation and maximum entropy methods.

Daniel Kessler, PhD. David S. and Ann M. Barlow Professor and Sr. Fellow at the Hoover Institution and Professor, by courtesy, of Health Research and Policy and Law

Research interests: Empirical research in law and economics, industrial organization, and the economics of health care.

Philip W. Lavori, PhD. Professor of Health Research & Policy

Research interests: Biostatistics, clinical trials, longitudinal studies, causal inference from observation studies, genetic tissue banking, and informed consent. Trial designs for dynamic (adaptive) treatment regimes, psychiatric research, and cancer.

Alex Macario, MD, MBA. Professor of Anesthesia and, by courtesy, Health Research & Policy

Research interests: Economics of health care, in particular the tradeoffs between costs and outcomes for patients having surgery and anesthesia; management of the operating room suite, and cost-effectiveness of drugs and devices.

Rudolf Moos, MD. Professor of Psychiatry and Behavioral Sciences

Research interests: Health care programs and the context, process, outcome, and cost of care.

Ingram Olkin, PhD. Professor of Statistics and of Education (Emeritus)

Research interests: Analysis of social and behavioral models, multivariate statistical analysis, correlational and regression models in educational processes, and meta-analysis.

Richard Olshen, PhD. Professor of Health Research & Policy (Biostatistics)

Research interests: Statistics and their applications to medicine and biology; tree-structured algorithms for classification, regression, survival analysis, and clustering.

Kristin L. Sainani, PhD. Clinical Assistant Professor, Health Research & Policy (Epidemiology)

Research interests: Epidemiology of musculoskeletal diseases; women's health.

Ross Shachter, PhD. Associate Professor of Management Science and Engineering

Research interests: Representation and analysis of uncertainty and medical decision analysis.

W. Richard Scott, PhD. Professor of Sociology (Emeritus)

Research interests: Effects of organizational structures on quality and cost of surgical care in hospitals, organizations of mental health services, and medical care studies in the Bay Area from 1945 to 1995.

Mei-Chiung Shih, PhD. Assistant Professor, Health Research & Policy (Biostatistics)

Research interests: Clinical trials, longitudinal studies, adaptive designs, genetic epidemiology.

Robert Tibshirani, PhD. Professor of Health Research & Policy (Biostatistics)

Research interests: Applied statistics, biostatistics and data mining.

AFFILIATED FACULTY AND ACADEMIC STAFF,

PRIMARY INSTITUTIONAL AFFILIATIONS OTHER THAN STANFORD UNIVERSITY

Paul Barnett, PhD. Director, Health Economics Resource Center, VA Palo Alto

Research interests: Cost-effectiveness of health care inventions, determination of the cost of health care, economic modeling in support of health care policy decisions, and cost-effectiveness of treatments for substance abuse and psychiatric disorders.

Ciaran Phibbs, PhD. Consulting Associate Professor of Health Research & Policy; Health Economist for the Health Economics Resource Center Veterans Affairs Palo Alto

Research interests: Perinatal care, hospital competition, health care technologies, hospital markets, demand for VA services, and how scale and capacity utilization affect hospital costs and how these interact with market forces.

Joe V. Selby, MD, MPH. Consulting Professor, Health Research & Policy; Director, Division of Research, Kaiser Permanente Northern California.

Research interests: Clinical epidemiology, quality of care for diabetes and cardiovascular disease.

Anita Stewart, PhD. Professor in Residence at the Institute for Health & Aging and the Department of Social and Behavioral

Research interests: AIDS stigma, promoting effective communication and decision-making for diverse populations, and aging research in diverse populations.

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Back cover photo: L.A. Cicero / Stanford News Service; photo of Jennifer Schneider provided by the Center for Primary Care and Outcomes Research (PCOR).

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