### HEALTH POLICY RESEARCH (HPR)

**HPR 501 Economics of Health Care Delivery**
How medical care is produced and financed in private and public sectors, economic models of consumer and producer behavior, applications of economic theory to health care.
Taught by: Dr. Mark Pauly
Course usually offered summer term only
Prerequisite: Course only open to Masters of Science in Health Policy Research students
Activity: Lecture
1 Course Unit

**HPR 503 Qualitative Methods in Health Research**
The purpose of this course is to expose students to a variety of qualitative approaches/methodologies that may be used in health services/policy research. In didactics we will discuss the pros and cons of a range of qualitative Methods, how the method is actually implemented (with multiple experts presenting approaches), and pair the presentation with a broader discussion in which students compare and contrast health oriented articles in which the method was used. Students will have the opportunity to apply the theoretical approaches to their own research interests with direct input from the faculty and their peers.
Taught by: Drs. Frances Barg and Judy Shea
Course usually offered summer term only
Prerequisite: Permission needed from Instructor
Activity: Lecture
1 Course Unit

**HPR 504 Principles and Practice of Healthcare Quality Improvement**
Healthcare delivery is complex and constantly changing. A primary mission of leading healthcare organizations is to advance the quality of patient care by striving to deliver care that is safe, effective, efficient, timely, cost effective, and patient-centered. The goal of this inter professional course is to provide students with a broad overview of the principles and tools of quality improvement and patient safety in health care while also guiding them through the steps of developing a quality improvement project. It will provide a foundation for students or practicing clinicians who are interested in quality improvement and patient safety research, administration, or clinical applications. As part of this course, students will design and plan for a real quality improvement project in their area of interest within healthcare using the methods and tools taught in the course.
Taught by: Jennifer S. Myers and Kathleen G. Burke
Course usually offered in fall term
Prerequisite: Permission needed from Instructor
Activity: Lecture
1 Course Unit

**HPR 550 Clinical Economics and Clinical Decision Making**
This course focuses on the application of decision analysis and economic analysis of diagnostic tests using two by two tables, likelihood ratios, and ROC curves. The course continues with the introduction of more general tools for decision analysis, including decision trees and other mathematical models. A major focus of the course is the application of economic principles to the evaluation of health outcomes. During seminars, students will carry out practictical exercises that include problem solving, critically analyzing published articles, and learning to use computer software that facilitates decision and economic analyses.
Taught by: Drs. Sankey Williams and Henry Glick
Course usually offered in spring term
Prerequisite: Permission needed from Instructor
Activity: Lecture
1 Course Unit

**HPR 580 Outcomes Research**
This course is divided into two main parts. The first part addresses issues related to the measurement of quality in healthcare. Included is a review of the classical-structure-process-outcome quality paradigm. The paradigm’s strengths and limitations are addressed. This part especially focuses on outcome measures of quality and examines the validity of alternative measures. The second part deals with observational, or quasi-experimental, research studies. It addresses the advantages and limitations of alternative designs, and covers the role of clinical risk adjustment in observational studies of medical interventions. It focuses on the problem of selection bias, and reviews recent methods for dealing with this bias, such as instrumental variables.
Taught by: Dr. Jeffrey Silber
Course usually offered in fall term
Prerequisite: Permission needed from Instructor
Activity: Lecture
1 Course Unit

**HPR 588 Advanced Leadership Skills in Community Health**
Grounded in a social justice perspective, this course aims to provide the student with a foundational overview of the field of community health and leadership skills in public health advocacy. The course encourages critical thinking about health outcomes framed by the broad context of the political and social environment. This course analyzes the range of roles and functions carried out by leaders in health care advocacy for marginalized communities; integrates knowledge of health policy and the key influence of government and financing on health outcomes; explores community-based participatory research and interventions as tools for change; and discusses ways to develop respectful partnerships with community organizations. An assets-based approach that draws upon the strengths of communities and their leaders provides a foundation for community-engagement skill building. The course emphasizes the development of skills and techniques to lead effective, collaborative, health-focused interventions for disenfranchised groups, including residents in urban neighborhoods.
Taught by: Heather Klusaritz, Terri Lipman, Walter Tsou
Course usually offered in spring term
Prerequisite: Enrollment in the National Clinician Scholars Program
Activity: Lecture
1 Course Unit
HPR 600 Introduction to Health Policy and Health Services Research
This course will provide students with an introduction to health services and health policy research. First, faculty representing various departments and and schools at the University of Pennsylvania will introduce students to a number of "hot topics," including health disparities, medical decision making, neighborhoods and health, quality of care, access to care, behavioral incentives, and cost effectiveness research. Second, the course will offer an introduction to various career paths in the research and policy domains. Third, the course will provide a brief overview of practical issues such as grant opportunities, data options, publishing, and dissemination.

Taught by: Drs. Andrew Spieker
Course usually offered summer term only
Prerequisites: This is only open to Masters of Science in Health Policy Research students.
Activity: Seminar
1 Course Unit

HPR 603 Health Services and Policy Research Methods I: Primary Data Design and Collection
This course will introduce students to commonly used primary data collection methods and provide multiple examples of how they have been used in health services research. Through the course students will define a primary data collection research project and develop the methods necessary to conduct the project. To get the full benefit of this course, students should use this course to develop the methods they plan to employ in their primary data collection project.

Taught by: Drs. Marilyn Schapira and Judy Shea
Course usually offered in fall term
Prerequisite: Permission needed from Instructor
Activity: Lecture
1 Course Unit

HPR 604 Introduction to Statistics for Health Policy
This is the first semester of a two-semester sequence. It is an introductory statistics course covering descriptive statistics, probability, random variables, estimation, hypothesis testing, and confidence intervals for normally distributed and binary data. The second semester stresses regression models.

Taught by: Dr. Andrew Spieker
Course usually offered in fall term
Prerequisite: Permission needed from Instructor
Activity: Lecture
1 Course Unit

HPR 605 Fundamentals of Health Policy
While academic researchers often think of health policy in terms of research evidence and outcomes, politics and political processes also play important roles. The purpose of this course is to provide those pursuing careers in health services research and health policy with an understanding of the political context from which U.S. health policy emerges. This understanding is important for researchers who hope to ask and answer questions relevant to health policy and position their findings for policy translation. This understanding is important as well to policy leaders seeking to use evidence to create change. The class provides an overview of the U.S. health care system and then moves on to more comprehensive understanding of politics and government, including the economics of the public sector, the nature of persuasion, and techniques and formats for communication. The course emphasizes reading, discussion and applied policy analysis skills in both written and oral forms. Concepts will be reinforced with case studies, written assignments and a final policy simulation exercise where students will be placed in the position of political advisors and policy researchers.

Taught by: Dr. David Grande
Course usually offered in fall term
Prerequisite: Permission needed from Instructor
Activity: Lecture
1 Course Unit

HPR 606 Health Services and Policy Research Methods II: Causal Inference Using Secondary Data
Empirical research for health care policy frequently involves the analysis of observational data—information that is not primarily collected for research purposes. With the rapid increase in U.S. health information technology capacity, future opportunities for research using these "secondary data" appear promising. The objective of this course is to teach the skills necessary to conduct quality health policy research using secondary data. These skills include formulating research aims and applying appropriate study designs for achieving these aims. The course will also include a survey of the content and structure of several commonly used administrative and public databases available to researchers and workshops to develop the skills to access and manipulate these valuable resources.

Taught by: Dr. Rachel M. Werner
Course usually offered in spring term
Prerequisite: Permission needed from Instructor
Activity: Lecture
1 Course Unit

HPR 607 Applied Regression Analysis for Health Policy Research
This course deals with the work-horse of quantitative research in health policy research—the single outcome, multiple predictor regression model. Students will learn how to 1) select an appropriate regression model for a given set of research questions/hypotheses, 2) assess how adequately a given model fits a particular set of observed data, and 3) how to correctly interpret the results from the model fitting procedure. After a brief review of fundamental statistical concepts, we will cover analysis of variance, ordinary least squares, and regression models for categorical outcomes, time to event data, longitudinal and clustered data. We will also introduce the concepts of mediation, interaction, confounding and causal inference.

Taught by: Dr. Nandita Mitra
Course usually offered in spring term
Prerequisite: Permission needed from Instructor
Activity: Lecture
1 Course Unit

HPR 608 Empirical Research Methods for Health Policy Research
This course deals with other useful methods of empirical research in health policy research—in particular, the use of secondary data. Students will learn how to use a variety of research methods and implement them in a health policy research setting. The course will cover methods such as content analysis, text analysis, and other methods of analyzing secondary data.

Taught by: Dr. Chandra Varma
Course usually offered in spring term
Prerequisite: Permission needed from Instructor
Activity: Lecture
1 Course Unit
HPR 611 Implementation Science in Health and Health Care
This course presents a survey of the field of implementation science in health. The structure of the course will include two parts. In the first part, we will introduce the field of implementation science, with an emphasis on theory, design and measurement. In the second part, we will focus on applied implementation science which will include examples of research programs in implementation science as well as applying insights of implementation science to practical implementation. An emphasis on qualitative and mixed methods approaches is included.
Taught by: Drs. Rinad Beidas and Meghan Lane-Fall
Course usually offered in spring term
Prerequisite: Permission needed from Instructor
Activity: Lecture
1 Course Unit

HPR 620 Community Based Participatory Research and Action
Community engagement is essential for interventional efforts, project development, as well as asking and answering health questions in a variety of settings. As in the use of any tool, community engagement requires both knowledge and skill. This class will focus on the use of community engagement to achieve community health goals through three integrated opportunities: collaboration/partnership, evidence-based principles and organizational development. The objectives of the course are to increase knowledge and skills in the following areas: delineating the types of methods used to establish and enhance collaboration/partnership with community stakeholders, learning the theories, principles, methods and best practices of collaborating with community stakeholders, developing and applying the skills needed to participate in community based collaborative activities and gaining an understanding of organizational development and infrastructure in the non-profit sector.
Taught by: Dr. Charmaine Smith-Wright
Course usually offered in fall term
Prerequisite: Permission needed from Instructor
Activity: Lecture
1 Course Unit

HPR 637 Advocacy & Public Health: Turning Knowledge Into Action
This course is designed to provide the foundational context and practical skills necessary to effectively advocate for evidence-based policy change in furtherance of public health objectives. The class will be interactive in nature and will require participation in public health advocacy exercises in order to hone advocacy skills. There will also be a focus on persuasive communication, both oral and written. We will explore the entire advocacy process from the identification of a problem and evaluation of possible policy solutions to utilizing the full range of advocacy tools to promote policy change.
Taught by: Drs. Ahaviah Glaser and Jennifer Gable
Course usually offered in spring term
Prerequisite: Instructor Permission Required
Activity: Lecture
1 Course Unit

HPR 650 Systems Thinking and Patient Safety
This blended online/in-classroom graduate level course integrates principles of systems thinking with foundational concepts in patient safety. Utilizing complexity theories, students assess healthcare practices and identify factors that contribute to medical errors and impact patient safety. Using a clinical microsystem framework, learners assess a potential patient safety issue and create preventative systems. Lessons learned from the science of safety are utilized in developing strategies to enhance safe system redesign.
Taught by: Drs. Kathy N. Shaw, Susan Keim and Catherine Wildenberg
Course usually offered in spring term
Activity: Lecture
1 Course Unit

HPR 660 Applied Predictive Modeling for Health Services Research
The course offers an introduction to the principles and applications of predictive modeling. It is geared toward health services researchers with an emphasis on clinical and policy scenarios and the use of electronic health record and administrative claims data. The primary goals of this course are to help each student understand (1) the fundamental concepts of predictive modeling and what distinguishes it from traditional causal inference approaches in statistics, (2) the different evaluation metrics for model performance and their appropriate use and (3) the role of domain knowledge in developing a statistical plan for model development with the end-user in mind. Students will be building their own predictive models by the end of the course and may elect to use R, STATA or Python for coding exercises. No prior programming experience is required. A background in basic statistical principles would be helpful.
Taught by: Dr. Gary Weissman
Course usually offered summer term only
Prerequisite: Permission needed from Instructor
Activity: Lecture
1 Course Unit

HPR 670 Health Care Strategic Leadership and Business Acumen
The weeklong intensive course aims at developing essential business acumen and leadership skills required to thrive in a constantly changing health care ecosystem. Taught by invited faculty who have experience working with health care leaders, this course will focus on actionable knowledge in financial acumen, strategic decision making, innovation and building high-performance teams. Through interactive mixed-mode delivery methods, faculty will share tools and frameworks, always with a focus on how to apply them, both personally and within an organizational context.
Taught by: Drs. Guy David and David Grande
Course usually offered summer term only
Prerequisite: Instructor permission required
Activity: Lecture
1 Course Unit

HPR 799 Independent Study
This course is designed to provide the student with an opportunity to gain or enhance knowledge and to explore an area of interest related to health policy research under the guidance of a faculty member.
Taught by: Faculty
Course offered summer, fall and spring terms
Prerequisites: Permission of Program Director and Faculty Member
Activity: Independent Study
1 Course Unit
HPR 951 Health Policy Research Thesis I
Each student completes a mentored research project that includes a thesis proposal and a thesis committee and results in a publishable scholarly product.
Taught by: Faculty
Prerequisite: Course only open to Masters of Science in Health Policy Research students
Activity: Masters Thesis
1 Course Unit

HPR 952 Health Policy Research Thesis II
Each student completes a mentored research project that includes a thesis proposal and a thesis committee and results in a publishable scholarly product.
Taught by: Faculty
Prerequisite: Course only open to Masters of Science in Health Policy Research students
Activity: Independent Study
1 Course Unit

HPR 954 Quality Capstone Project
The purpose of the quality capstone project is to provide students with the opportunity to lead and experience each of the 5 phases of quality improvement work: Define - Measure - Analyze - Improve - Control (DMAIC). A quality improvement mentor will be assigned to each student completing this course. Preparation and submission of the quality capstone project as an abstract to a local, regional or national meeting is a requirement for completion of this course.
Taught by: Drs. Kathleen Burke and Jennifer S. Myers
Course offered summer, fall and spring terms
Prerequisite: This course is only open to CHIPS Concentration fellows in the Masters of Science in Health Policy Research
Activity: Masters Thesis
1 Course Unit