INTRODUCTION

The MSHP is a two year training program that leads to a Master of Science degree. This program is based out of the University of Pennsylvania, Perelman School of Medicine in close collaboration with the Leonard Davis Institute (LDI) and the Department of Health Care Systems at the Wharton School. Building upon the trans-disciplinary nature of LDI, this program is also closely affiliated with the Annenberg School for Communication and the School of Social Policy and Practice--two schools in the University of Pennsylvania with growing interest in and commitment to the fields of health services research and health policy. The MSHP also benefits from LDI’s strong connections to multiple other schools at Penn, including the School of Arts and Sciences, the School of Nursing and the Law School.

The primary goal of the Master of Science in Health Policy Research training program is to train outstanding investigators in health services and policy research. Students completing the MSHP program are well situated to pursue careers in academia, non-profit organizations and health policy. Tailored educational experiences enable students to engage effectively with community partners, policy makers, and other interested stake holders. Through mentored research students learn to plan and execute policy-relevant, patient-centered research using a variety of different methodologies including qualitative, cross-sectional, simulation, quasi-experimental, and experimental study designs. Finally, the educational experience is deepened with a two year career development lecture series that introduces students to skills essential to careers more generally, including applying for grant funding, managing a research team, negotiating a job, communicating research findings, creating a national reputation and other skills that are just as important to career success as skills in research methods.
**Major Curricula Areas**

- Core courses in health economics, health policy, research methods and statistics
- Electives drawn from throughout the University of Pennsylvania
- Mentored research

**Eligibility**

- Students who have or are currently enrolled in terminal degrees in other fields (MD, PhD, JD or other degree) are eligible for the Health Policy Research Program. PhD prepared nurses and medical students will also be considered.
- Students interested in careers in academic/non-profit health services research, industry, or health policy.

**Resources**

**Research at the University of Pennsylvania**

With 174 research centers and institutes, research is a substantial and esteemed enterprise at Penn. The research community includes more than 4,200 faculty and 870 postdoctoral fellows, nearly 3,800 graduate students, 5,400 academic support staff and graduate assistants, and a research budget of $660 million. The scale and interdisciplinary character of our research activities make Penn a nationally-ranked research university. For more information, visit [www.upenn.edu](http://www.upenn.edu).

**Leonard Davis Institute of Health Economics (LDI)**

The Leonard Davis Institute of Health Economics (LDI) is the center of the University of Pennsylvania’s activities and programs in health services research, health policy, and health care management executive education. A formal cooperative venture among Penn’s schools of Medicine, Business, Nursing, Communication, and Dental Medicine, and the Children’s Hospital of Philadelphia, LDI works to improve the health of the public through multidisciplinary studies on the medical, economic, social, and ethical issues that influence how health care is organized, financed, managed, and delivered. LDI represents one of the earliest efforts to promote collaborative scholarship in health care through formal partnerships within the same university among the clinical, management, and social sciences. For more information, visit [www.upenn.edu/ldi](http://www.upenn.edu/ldi).

**Curriculum**

The program curriculum spans four major domains: health economics, health policy, research methods, and statistics. There are seven core courses, each led by a core faculty member. Students will complete a mentored research project (a Master’s thesis), with the assistance of a mentor and
two additional members of the thesis committee. The thesis will be completed over the two years of the program with the goal of producing a publishable manuscript by the end of the second year.

**Selected sampling of thesis topics:**
- Rationale Allocation of Blood Products
- Power Over Parity: Intimate Partner Violence and Issues of Fertility
- Critical Illness Outcomes in Specialty Versus General Intensive Care Units
- Promoters and Barriers to Fruit, Vegetable, and Fast-Food Consumption Among Urban, Low-Income, African Americans
- Effect of Health Insurance on Utilization of Ambulance Services in the United States
- The Impact of Resident Duty Hour Reform on Hospital Readmission Rates
- Cost-Effectiveness of Therapeutic Hypothermia After Cardiac Arrest
- Well Child Care Adherence Predictors Over Time in a Cohort of Medicaid-Eligible Infants
- The Effect of Resilience on Posttraumatic Stress Disorder in Trauma-Exposed Inner City Primary Care Patients

Electives can be taken from the program or in schools across the University. Example of existing courses include advanced health policy from the MSHP; advanced epidemiology or biostatistics from the Center for Clinical Epidemiology and Biostatistics; advanced health care economics and health care statistics from the Wharton School; survey design, measurement and analysis from the Annenberg School; social policy and social environment from the School of Social Policy and Practice; and social forces and demography from the School of Arts and Sciences. A total of 12 course credits are required for completion of the degree.

<table>
<thead>
<tr>
<th>FIRST YEAR</th>
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<th>SECOND YEAR</th>
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<tbody>
<tr>
<td><strong>Summer</strong></td>
<td><strong>Fall</strong></td>
<td><strong>Spring</strong></td>
</tr>
<tr>
<td>Economics of Health Care Delivery</td>
<td>Introduction to Statistics</td>
<td>Applied Regression Analysis</td>
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<tr>
<td>Intro to Health Policy and Research</td>
<td>Health Services and Policy Research Methods I</td>
<td>Health Services and Policy Research Methods II</td>
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</tbody>
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**CORE COURSES**

1. *Economics of Health Care Delivery (HPR 501)*

Examines how medical care is produced and financed in private and public sectors, economic models of consumer and producer behavior, and applications of economic theory to health care
2. *Introduction to Health Policy and Health Services Research* (HPR 600)
Provides students with an introduction to health services and health policy research. Faculty representing various departments 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.

Introduces students to commonly used primary data collection methods, provides examples of how they have been used in health services research. Students will define a primary data collection research project and develop methods necessary to conduct the project.

Introduces research methods appropriate for data analysis of administrative and public datasets to address health policy issues.

5. *Introduction to Statistics for Health Policy* (HPR 604)
Introduces basic concepts of statistical thinking and analysis. Includes descriptive statistics, hypothesis testing for differences between two or more groups and correlation and prediction.

Students learn how to select an appropriate regression model for a given set of research questions/hypotheses, assess how adequately a given model fits a particular set of observed data, and how to correctly interpret the results from the model fitting procedure.

7. *Fundamentals of Health Policy* (HPR 606)
Students gain an overview of the U.S. health care system and comprehensive understanding of politics and government, economics of the public sector, the nature of persuasion, and techniques and formats for communication.

**SELECTED ELECTIVE COURSES**

1. *Qualitative Methods in Health Research* (HPR 503)
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. Students have the opportunity to apply the theoretical approaches to their own research interests with direct input from the faculty and their peers.

2. *Principles and Practice of Quality Improvement and Patient Safety* (HPR 504)
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.

3. Clinical Economics and Decision Making (HPR 550)
This course focuses on the application of decision analysis and economic analysis to clinical and policy research. A major focus of the course is the application of economic principles to the evaluation of health outcomes.

4. Outcomes Research (HPR 580)
This course addresses issues related to the measurement of quality in healthcare. Included is a review of the classical-structure-process-outcome quality paradigm. In addition, this course 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.

5. Community Engagement: Collaboration, Research, and Action (HPR 620)
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 focuses on the use of community engagement to achieve community health goals through three integrated opportunities: collaboration/partnership, evidence-based principles, and organizational development.

6. Topics in Leadership Health Policy (HPR 602)
In this seminar series, students combine didactic sessions reviewing core leadership concepts and skills with reflective discussions on experiences in leadership through their training and community relationships. Prerequisite: Participation in the National Clinician Scholars Program

7. Achieving Evidence-Based Health Policy (HPR 610)
Examines how research can influence health policy. Individual sessions are devoted to topics such as the Nurse-Family Partnership program, health insurance, tobacco use, and early childhood mental health.

8. Implementation Science in Health and Health Care (HPR 611)
The course is largely case-based, evaluating examples of both successful and unsuccessful translational efforts. The structure of the course focuses on 3 successive stages—(1) organizational theory for designing interventions designed to change practice, (2) implementation strategies for optimizing adoption, and (3) program evaluation methods for assessing the success or failure of implementation. Specific tools in qualitative and mixed methods approaches are emphasized.
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