



## College of Public Health

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September 23, 2021

Amanda Thein, PhD  
Associate Provost, Graduate and Professional Education  
Dean, Graduate College  
201 Gilmore Hall  
Iowa City, Iowa 52242

Dear Dean Thein,

Attached is the updated proposal for the Master of Science in Health Services Research. The proposed degree program will be housed in the Department of Health Management and Policy in the College of Public Health, and will effectively replace the Master of Science in Health Policy for which we are currently requesting closure.

As noted in the attached proposal, the MS in Health Policy was created in 2014 after our faculty determined there was sufficient need to provide more comprehensive training. The program ultimately struggled to attract a viable number of students due in part to the fact that it was not well-differentiated from the Master of Public Health in Policy degree. Yet the need for a master's degree program with an emphasis on health services research remains stronger than ever. The challenges with the COVID-19 pandemic have illustrated and expanded the need for individuals with rigorous training in health services research. There is no shortage of challenges as public health policies continue to evolve, and health disparities and lack of access to high-quality health services continue to be exacerbated by incoming inequality and social stratification. The MS degree program will provide opportunities for graduate students to enter into career pathways that are important, and will continue to be in high demand in the future, and has great potential to lead to admission into a doctoral program.

The College of Public Health strongly supports the proposed degree program. Please let me know if you have any further questions.

Sincerely,

A handwritten signature in blue ink that reads "Edith A. Parker".

Edith A. Parker, DrPH, MPH  
Dean, College of Public Health  
Professor of Community and Behavioral Health

UNIVERSITY OF IOWA  
COLLEGE OF PUBLIC HEALTH  
DEPARTMENT OF HEALTH MANAGEMENT AND POLICY  
Proposal to create a new degree program  
MASTER OF SCIENCE DEGREE IN HEALTH SERVICES RESEARCH

Program College: Graduate College  
Curricular College: College of Public Health  
Academic Unit: Health Management and Policy  
Degree Objective: Master of Science (non-thesis)  
Program: Health Sciences Research  
Subprogram: N/A  
Available to: Degree-seeking students  
Advisor: Kanika Arora  
Effective Session: Fall 2022  
Declarable in MyUI: No  
CIP Code: 51.2211

**Corresponding degree program closure**

Program College: Graduate College  
Curricular College: College of Public Health  
Academic Unit: Health Management and Policy  
Degree Objective: Master of Science (non-thesis)  
Program: Health Policy  
Subprogram: N/A  
Available to: Degree-seeking students  
Effective Session: Fall 2021  
Declarable in MyUI: No  
CIP Code: 51.2201 - Public Health, General.

I. Purpose of the Program

The mission of the Master of Science (MS) Degree in Health Services Research is designed to provide students with **content knowledge and methodological skills** pertaining to the practice of health services research. Evaluating the organization, delivery, and outcomes of health services and impacts of health policies on health services use and health outcomes is intrinsically interdisciplinary and as such our students will acquire both theoretical knowledge of U.S. health policy, health economics, and the organization and delivery of health services as well as a range of analytic skills that allow them to design and execute health services research studies. We strive to maintain a non-partisan educational environment, building our degree program upon the principles set forth by the Association of Schools and Programs of Public Health.

The vision of the Master of Science (MS) degree in Health Services Research is to be nationally recognized for preparing graduates for research careers in a variety of applied settings including academia, think tanks, government agencies, private sector organizations, and other settings where health services research skills are sought. The program is also designed to provide clinicians with the health services research skills that they need to work as

health services researchers in a wide variety of settings. Given the program's strong emphasis on research design, evaluation, and quantitative methods, it is also a pathway for students who desire to prepare themselves to be competitive applicants for doctoral studies in health services research, health policy, health economics, and other closely related fields at the University of Iowa or other leading institutions. The program is also designed in a way that doctoral students in HMP will earn the MS degree as they complete coursework and exam requirements for the PhD program ("en passant"). As such, it will be an attractive feature of our doctoral program that presents an advantage over several other peer PhD programs.

The degree offering is consistent with the mission of the University of Iowa, College of Public Health (CPH) to promote health and prevent injury and illness through commitment to education and training, excellence in research, innovation in policy development, and devotion to public health practice. The degree program also will contribute to the CPH vision of serving Iowa and the Midwest as one of the nation's premier state-assisted schools of public health.

## **II. Present Need**

In 2013, the faculty of the Department of Health Management and Policy determined there was sufficient need to create an MS degree in health policy. This program launched in 2014, but has struggled to attract a viable number of students. A major concern is that the program was not well-differentiated from the MPH in Policy. However, the need for a master's degree program in the Department of Health Management and Policy with an emphasis on health services research remains stronger than ever. First, with the continued expansion of the health care system and the perennially evolving public policies and challenges of ensuring access to high-quality, cost-effective health services, the need for individuals with rigorous training in health services research will continue to increase into the foreseeable future. The MS degree program will provide opportunities for graduate students to enter into career pathways that are exciting, important, and in high demand. Second, no other degree program at the University of Iowa (or at any other university within the state of Iowa) offers such an explicit focus in health services research at the master's level. Finally, the department recognized that, since its founding in 1999, the University of Iowa, College of Public Health, Department of Health Management and Policy has hired several faculty and developed numerous courses covering various topical areas, conceptual analysis, and methods (design and statistical modeling) in health services research. Indeed, the groundwork for a strong and distinct degree offering within the College of Public Health has been established. Thus, we are proposing to replace the MS in Health Policy with an MS in Health Services Research. By comparison to the current program, the new degree program will include fewer total credit hours, a research project for the final exam in lieu of a thesis, and the ability to complete the program in 1-year or 1 and a half years. Also, it is fully embedded in the PhD program so that doctoral students can earn the MS degree as part of completing doctoral training requirements (*en passant*). The goal of these changes is to develop a program that is more appealing to a steady pipeline of potential students, including both traditional and non-traditional students (e.g., recent bachelor's degree recipients, clinical residents and fellows, medical students who have completed their preclinical training, and others). It will also attract additional doctoral students who will see earning an MS degree "*en passant*" as an added benefit. Additionally, the MS in Health Services Research will have a heavier emphasis on core health services research courses with significantly less overlap of the MPH curriculum.

## **III. Description of the Program**

Students who enroll in the MS in Health Services Research program will partake in four types

of educational experiences. First, students will complete required coursework in health services research design, statistical methods, health policy, health economics, the organization and delivery of health care services, and the essentials of public health. Second, students will have the opportunity to develop their own interests in these areas through the completion of 6 semester hours of elective coursework.

Altogether the students will complete a minimum of 30 semester hours of coursework (a detailed plan of study is shown below). This may be completed in 1-year of full-time study (fall, spring, summer) or in 1 and a half years over 3 full semesters (2 fall semesters and 1 spring semester). Third, students will be provided sufficient opportunity to partake in extracurricular learning opportunities that focus on health services research. These include lecture series, seminars, journal clubs, and conferences. Finally, the students will complete a final research project that culminates in the preparation of a manuscript based on a piece of original empirical research, as their final requirement for the MS degree. Students will have the opportunity to work closely with their mentors and other department faculty on research projects. These partnerships are likely to yield ideas for their final research projects. Students will have access to a full suite of statistical software programs (SAS, Stata, SPSS and other programs) through the department.

The two programs that could be classified as “closely allied” are the current Master of Public Health (MPH) in Policy degree and the Doctor of Philosophy (PhD) in Health Services and Policy. The proposed MS degree program has been intentionally designed as a complement to, rather than a substitute for, these existing programs. As noted above, students in the PhD program will earn the MS degree as part of fulfilling doctoral training requirements. Required courses for the MS degree are part of the course work required for PhD students. In lieu of the final research project, doctoral students will complete the final MS degree requirement after successfully completing their doctoral comprehensive exams.

While the proposed MS degree curriculum does share certain core courses with the MHA and MPH degree curriculums, the MS in Health Services Research degree option is designed to target a distinct student population. Specifically, the MHA and MPH degrees are designed as terminal professional degrees primarily for those individuals who are currently practicing, or intend to practice, a health administration or public health career. The MPH in Policy degree is primarily designed to prepare students to become leaders in the field of public health and the MHA (Master of Health Administration) degree is designed to prepare students to become leaders in health administration. By contrast, the MS degree is primarily designed to prepare individuals for careers in health services research<sup>1</sup> in various public and private settings or for doctoral level training in this field. Because of its focus on health services research, this MS program is very well differentiated from the MS in Clinical Investigation offered by the Department of Epidemiology which is largely focused on clinical research.

In sum, the MS program will attract: 1- new students (primarily undergraduates and clinicians) who desire masters level training in health services research as a terminal degree; 2- additional

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<sup>1</sup> The Agency for Healthcare Research and Quality (AHRQ) defines health services research in the following manner: “Health services research is a “multidisciplinary field of scientific investigation that studies how social factors, financing systems, organizational structures and processes, health technologies, and personal behaviors affect access to health care, the quality and cost of health care, and ultimately, our health and well-being.” Applied health services research provides data, evidence, and tools to make health care affordable, safe, effective, equitable, accessible, and patient-centered. For example, products stemming from health services research serve to enable providers and patients to make better decisions. They also can be used to design health care benefits and inform policy.”

doctoral students who value the MS degree as an added benefit (especially as a safety mechanism in case of not succeeding in fulfilling the PhD program requirements); and 3- students who are who are contemplating PhD level training in health services research but not yet ready to commit to doctoral training.

## Program Curriculum

The MS in Health Services Research curriculum is designed to provide students with a solid theoretical and methodological foundation. Through their theory courses, students will develop familiarity with the organization, financing, and delivery of health care in the United States, and will also be introduced to the basics of health policy and health economics in separate courses. Through their elective coursework—and based on their interests—students will be able to tailor their degree program to emphasize additional (and more advanced) study in any of these areas. However, students do not formally declare an area of emphasis for the MS degree. All students will also be exposed to the essentials of public health and the importance of scholarly integrity and research ethics.

Through their methods courses, students will become familiar with the basic principles of statistical analysis and, research design, including multivariate regression methods. Students may also choose additional training in statistical analysis and econometric methods commonly employed in health services research as part of their elective coursework. Finally, students will combine what they have learned from their theoretical and methodological coursework to undertake a final research capstone project appropriate for the level of a master's degree. This work will result in a manuscript based on an original piece of empirical research. Submitting the manuscript (and eventual acceptance for publication) are expected, but not required for conferral of the degree. The reasons for requiring a research project that involves writing a potentially publishable manuscript instead of a thesis are to allow the student greater flexibility with project completion and writing deadlines (so that the program can be completed in one year or one and a half years) and to have students gain experience in writing a research paper for publication. Students may also benefit from citing a completed (or under review) manuscript on their CV for job placement or applying to PhD programs.

## Admissions

Students will be admitted to the program in the fall semester. Applicants will be recruited from all disciplines and undergraduate degree programs, with particular emphasis placed on those from political science, public administration, economics, or other social sciences. Applicants will also be recruited from the pool of clinical residents and fellows, and medical students who have completed their pre-clinical training, at the University of Iowa and elsewhere. Applicants will be encouraged to learn about the degree by viewing the program website and interviewing departmental program administrators and individual faculty.

Admission criteria for students will be consistent with other departmental masters-level degree offerings (e.g., Masters in Health Administration, MPH in Policy). In particular, applicants must have a bachelor's degree and have achieved a minimum GPA of 3.0. Graduate Record Exam (GRE) scores are required with preferred minimum of 151 on the verbal and 153 on the quantitative and an analytical writing score of 3.5 or above. Alternatively, applicants may have taken the Medical College Admissions Test (MCAT) and must have achieved a minimum score of 125 per section or a total combined score of 500. For international applicants, an acceptable TOEFL score is a minimum of 600 (250 computer-based test or 100 internet-based test) or a minimum IELTS score of 7.0 (with no subscore lower than 6.0). International

applicants must take the TOEFL exam. Applicants will be required to offer a professional resume (CV), personal statement, and three letters of recommendation.

### Student Advising

At the beginning of the first semester, each student will work with a primary advisor to develop a plan of study (MyPlan in MyUI). The student also will engage the advisor and other program faculty in securing research assistantships and pursuing professional development opportunities. After the student's first semester, the MyPlan will be reviewed and revised in coordination with the primary advisor and other program faculty.

### Program Competencies

Upon completing a MS in Health Services Research, students will be able to:

1. Evaluate the organization, financing, and delivery of U.S. health services
2. Evaluate policies for their impact on public health and health equity
3. Analyze the behavior of health care market stakeholders using the principles of health Economics
4. Select the appropriate study design and statistical models for health services research questions and outcomes
5. Use statistical computing programs to analyze quantitative data
6. Conduct a study using health services research methods

Competency 1: Evaluate the organization, financing, and delivery of U.S. health services

#### Learning Objectives:

Through the required course HMP:4000 (Introduction to the U.S. Healthcare System) or its alternative HMP:5005 (Introduction to Healthcare Organization and Policy), students will:

- o Gain knowledge of the organization, financing, and delivery of health care services in the U.S.
- o Understand which factors helped to shape our existing health care system
- o Analyze the relationship between the structure of health care organizations and providers, public and private health insurance, and the access, cost, and quality of U.S. health care
- o Gain basic familiarity with the U.S. health policy process and historical health reform efforts

Competency 2: Evaluate policies for their impact on public health and health equity

#### Learning Objectives:

Through the required course HMP:5610 (Health Policy), students will:

- o Translate individual and population health issues into a health policy agenda
- o Identify groups and individuals most involved with policy making and assess how they compete and cooperate
- o Locate and appraise policy making venues, including federal, state & local health policy making institutions
- o Model policy formulation and implementation
- o Assess how institutional structures and processes affect policy making
- o Provide critical and predictive analysis about policy making
- o Evaluate the potential impact of public policies on health care outcomes.

Students may also elect to take HMP:5650 (Health Policy Analysis) and other elective coursework to gain additional expertise in these areas.

Competency 3: Analyze the behavior of health care market stakeholders using the principles of health economics

Learning Objectives:

Through the required course HMP:5410 (Health Economics I), students will:

- o Understand and apply the concepts and principles of microeconomics to health care markets, organizations and public policy.
- o Apply economic theories to understand the demand for health and health care and supply and production of health services.
- o Apply the economic concepts and principles from the theory of insurance to health insurance and health insurance markets.
- o Understand and apply the basic economic theories of the firm and market structure as they impact the performance of health care organizations including the economic implications of changes in market structure such as through mergers.
- o Apply economic concepts to analyze the effects of regulation on market structure, conduct and performance.
- o Describe the main economic factors that influence the structure, conduct and performance of the insurance, physician, hospital, and nursing markets.
- o Utilize economic concepts to analyze and assess the potential impact of changes in mechanisms of payment for services on beneficiaries, employers and providers.
- o Understand and apply the basic concepts and methods of cost-effectiveness analysis.

Students may choose other elective coursework to gain additional expertise in these areas (for e.g., HMP:7550 Cost-Effectiveness and Decision Analysis).

Competency 4: Select the appropriate study design and statistical methods for health services research questions and outcomes

Learning Objectives:

Through the required course HMP:7950 (Design Issues in Health Services Research), students will:

- o Understand the logic of causality in research methods
- o Define a feasible research question and develop an appropriate explanatory theory
- o Select appropriate sampling methods
- o Identify observational and experimental research designs used in public health research
- o List the strengths and weaknesses of each design
- o Critically assess research for strengths and weaknesses
- o Develop a research proposal

Learning Objectives:

Through the required course BIOS:4120 (Introduction to Biostatistics) and BIOS:5120 (Regression Modeling and ANOVA in the Health Sciences) students will:

- o Learn the utility and limitations of some basic statistical methods
- o Learn univariate and multivariate statistical models and tests
- o Understand and apply linear and logistic regression models
- o Learn to detect instances when a consultation with a biostatistician or

econometrician is needed for study design, data analysis, interpretation, and report. Students may also gain additional expertise in these areas via elective coursework (e.g., HMP:7960 HSR I and HMP:7965 HSR II, additional courses in biostatistics or econometrics).

Competency 5: Use statistical computing programs to analyze quantitative data

Learning Objectives:

Through the required courses HMP:7950 (Design Issues in Health Services Research), BIOS:4120 (Introduction to Biostatistics) and BIOS:5120 (Regression Modeling and ANOVA in the Health Sciences) students will:

- o Learn the basics of at least one statistical software that enables the analyses they develop and apply especially regression models (e.g., SAS, Stata, or R)
  - o Learn how to read in existing data in a variety of formats
  - o Learn how to create new variables, code/recode variables, merge datasets, etc.
  - o Conduct the analyses needed for courses and the Final Research Project.
- Students may also gain additional expertise in these areas via elective coursework

Competency 6: Conduct a study using health services research methods

Learning Objectives:

Through the required final research project, students will:

- o Develop a novel and important health services research or policy question and generate one or more theory-driven hypotheses to be empirically evaluated
  - o Identify existing data or collect primary data appropriate to answering the research question
  - o Use appropriate health services research methods to conduct an empirical study resulting in a manuscript based on original empirical research.
- Through elective coursework (e.g., HMP:7960 HSR I and HMP:7965 HSR II) students may deepen their expertise in this area.

Course Requirements

Students will be required to fulfill all Graduate College requirements. Additionally, students will be required to complete 30 semester hours of graduate-level coursework. This number of credits was determined by the competencies the program aims to achieve and the course work needed to achieve those competencies as detailed above. Even though this is the minimum number of credits allowed for an MS degree by the Graduate College, we believe that the proposed course work is sufficient for achieving the intended competencies. Furthermore, many of the similar MS programs in peer institutions in this field have total credits in the low 30s.

Examples include:

Northwestern (11 courses) <https://www.feinberg.northwestern.edu/sites/cehs/our-programs/health-services-outcomes-research/curriculum.html>

Boston University (32 credits) <https://www.bu.edu/academics/sph/programs/health-services-research/ms/>

Michigan (32 credits) <https://ihpi.umich.edu/about-masters-degree-health-health-care-research>

Minnesota (34 credits)

<http://www.sph.umn.edu/sph-2018/wp-content/uploads/docs/infosheet/umn-sph-info-hsrpa.pdf>



Students will also be required to complete a final research project and oral exam by a committee based on that project. A maximum of 6 s.h. of coursework may be transferred and at least 24 s.h. of coursework must be completed under the auspices of The University of Iowa after admission to the MS program in Health Services Research. A detailed plan of study for the two options of completing the program in a 1-year or 1 and a half years is provided as a separate document.

Note that all required theory and methods course work are courses that are already being offered on an annual basis.

IV. Relationship to resources developed by the Committee on Institutional Cooperation  
Not Applicable

V. Comparison with standards established by a regional accrediting association

The University of Iowa College of Public Health is accredited by the Council on Education for Public Health (CEPH). Since the proposed MS in Health Services Research is an academic program offered by the Department of Health Management and Policy, College of Public Health, it will fall also under the CEPH accreditation criteria.

VI. Program Implications

The proposed MS in Health Services Research is not anticipated to have any direct implications on existing programs at the University of Iowa. However, the program may serve as a link to the undergraduate program in Public Health as well as undergraduate programs in Political Science, Sociology, Urban Planning and Environmental Affairs and other liberal arts and sciences.

VII. Letters of Support

Letters of support for the proposed MS degree program in Health Services Research are in Appendix A.

VIII. Program Faculty

We have identified nine faculty who currently are available to serve the proposed program, all from the Department of Health Management and Policy:

Kanika Arora, PhD, Assistant Professor

Brian Kaskie, PhD, Associate Professor

Keith J. Mueller, PhD, Gerhard Hartman Professor and Head

Dan Shane, PhD, Associate Professor

Hari Sharma, PhD, Assistant Professor

Thomas Vaughn, PhD, Associate Professor

Marcia Ward, PhD, Professor

George Wehby, PhD, Professor and Director of MS and PhD Programs

Xi Zhu, PhD, Associate Professor

IX. Expected Enrollment

We expect enrollment to increase over time, with a minimum number of two students

entering during the first year of operation and growing to a minimum of five students entering during the fifth year of operation, with a target range of 10 to 15 students. As noted above, doctoral students in HMP will earn the MS degree as part of fulfilling PhD program requirements (en passant).

#### IX. Statement of additional needed budget support

The Department of Health Management and Policy will provide all necessary support for this program, from the following sources:

- Faculty currently teaching the core courses for this program
- Faculty who will serve as academic advisors and capstone project advisors
- Student services from the staff of the Department (two full time and one student assistant provide support for the Department's graduate programs)
- An annual budget allocation from department sources, including University Foundation accounts dedicated to student support. The allocation will be used as determined by the Quality Improvement Committee for the program, to include a combination of graduate student assistantships, scholarships, support for student educational opportunities, and administrative support if the program meets growth targets.

#### X. Assessment of future needs, commitments, and opportunities

Demands for analytical talent to inform policy development in health care delivery, finance and organization are expected to grow as the nation's delivery system undergoes fundamental change during the next decade and beyond. Policy makers and organizations that support the health care enterprise will require analysts trained in both policy development and rigorous research methods because decisions will need to be evidence-based and policies will require evaluation that can quickly reject or improve new approaches