

## EPID 837: Health Services Research | Methods and the Use of Health Administrative Data

**LOCATION:** Carruthers Hall, Room 311

**DAY/TIME:** Tuesdays, 10:00am – 1:00pm

**INSTRUCTOR:** Sahar Saeed, Assistant Professor

**OFFICE HOURS:** Tuesdays, 1:00-2:00 pm (other times can be accommodated)

### Traditional Territory Acknowledgement

Queen's University is on land which has long served as a site of meeting and exchange amongst Indigenous peoples, including the Haudenosaunee and Anishinaabe nations. We acknowledge and thank the diverse Indigenous people whose footsteps have marked this territory on which peoples of the world now gather.

This outline assumes in-class learning and is subject to changes based on public health directives

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**DESCRIPTION:** This course introduces health services research methods related to routinely collected health data and will cover approaches for assessing healthcare access, quality, effectiveness, and policy. The course will focus on using Ontario's administrative health data sources (ICES data holdings); however, students will also be introduced to other routinely collected health data sources. Students will learn the utility of using secondary data for research purposes and how to critically evaluate published studies (identifying the strengths and weaknesses of secondary databases, data accuracy, and bias). An emphasis will be made on various study designs and analytical methods to analyze the data based on the proposed research question. The course is designed to support students who will be using routinely collected health data for a health services research-oriented thesis or practicum, as well as those with an interest in using these research methods later in their career. Class sessions will highlight examples of published or ongoing health services research.

**FORMAT:** This course will include lectures, invited presentations, discussions of published studies, and student presentations.

**COURSE PRE-REQUISITES:** This course will meet the criteria for an elective in the MSc, MPH, and Ph.D., programs in the Department of Public Health Sciences. Students may audit the course with the permission of the instructor. Completion of EPID 801 is highly recommended.

### LEARNING OBJECTIVES:

By the end of this course, students should be able to:

- Recognize the diversity of research questions, study designs, data sources and methodologies applied in health services research.
- Identify key biases when using secondary data sources.
- Understand the importance of a critical appraisal when interpreting health services research.
- Develop basic skills and knowledge for carrying out health services research with secondary data:
  - develop a research question for a health care issue,
  - assess data validity
  - select an appropriate study design, and
  - plan appropriate statistical analyses.
- Stealthily develop written and oral communication skills for disseminating health services research.

### LEARNING GOALS:

- Apply health services research methods to answer research questions using routinely collected health data by identifying the appropriate data, study design and statistical approach
- Critically assess published health services research studies

## COURSE SCHEDULE\*

Week	Date	Topic
1	September 6	Introductions, Course Overview, Introduction to Health Services Research
2	September 13	Health care in Canada, Data Sources (including IC/ES) and Measurement
3	September 20	Algorithms, Validity, Reliability, Study Design Review and Tools for Critical Appraisal
4	September 27	Access (Research questions, study designs, methods/analysis)
5	October 4	Equity Diversity and Inclusion (EDI) related to Health Services Research <i>Critical Appraisal of Papers related to Access</i>
6	October 11	Fall Break
7	October 18	Health Care Quality (Research questions, study designs, methods/analysis)
8	October 25	Sex/gender considerations related to Health Services Research <i>Critical Appraisal of Papers related to Health Care Quality</i>
9	November 1*	Effectiveness (Research questions, study designs, methods/analysis)
10	November 8	Partnerships for Indigenous related to Health Services Research <i>Critical Appraisal of Papers related to Effectiveness</i>
11	November 15*	Program and Policy Evaluation (Research questions, study designs, methods/analysis)
12	November 22	Knowledge dissemination related to Health Services Research <i>Critical Appraisal of Papers related to Program and Policy Evaluation</i>
13	November 29	Final Presentations

\*Subject to revisions

\*\*Mini Presentations

## READINGS

No required readings for lecture days; however, 3-4 journal articles (depending on the final number of students) will be assigned to read on “critical appraisal” days. Supplemental articles may be posted (but this reading is not mandatory).

## EVALUATION

Components	Weight	Deadline
<b>Critical Appraisal Presentations</b> 15 min presentation of a paper assigned, followed by a 10-25 min discussion (times will depend on enrollment)	25%	Oct 4, Oct 25, Nov 8, Nov 22 (TBD Randomly and depending on final enrollment)
<b>Participation</b> During class assignments and critical appraisal discussions (You will be evaluated by your peers and the instructor)	15%	Dec 2 (peer evaluations due)
<b>HSR Study Proposal</b>	60%	
Mini-Presentations* max 3 mins	5% (2.5% each)	Nov 1 (Research Question) Nov 15 (Study Design)
Final Presentation**	10%	Nov 29
Written Proposal (max 3500 words)	40%	Dec 5
Peer Evaluation (max 300 words)	5%	Dec 10

\*Introduction/Research Question (PICOT); Study Design Data Source and Variables

\*\*Summary of all of the above plus (FINER), Analysis, expected impact and knowledge dissemination plan

## DETAILS OF EVALUATION

### **1. Critique of health services research article (25%)**

You will be assigned a health services research article (randomly) that uses routinely collected health data. You will summarize and critique the study by preparing a 15 minute presentation that includes:

- A brief description of the study, including background/rationale, objective(s), study design, study population, data and variables, analysis, results and conclusions. Be sure to summarize the study findings: what are the bottom-line results, how strong is the effect(s) reported, and how precise are the results?
- Your thoughts or concerns about the validity and quality of the study according to the relevant critical appraisal checklist.
- Lead the class in discussion

You will be evaluated on the clarity of your presentation, identifying the strengths/weaknesses of the paper and your leadership skills in leading the class in discussion.

### **2.Participation (15%)**

Your participation marks will be assessed by your participation in class discussions (lecture days and critical appraisal days) by the instructor (10%) and your peers (5%)

### **3. Development of study proposal using routinely collected health data (60%)**

Working alone or in pairs, you will develop a short research proposal that uses routinely collected health data to answer a health service research question.

- a) **Mini-presentations (5%):** Students are to present the rationale, research question (2.5%), and study design (2.5%) clearly and concisely in 3-minute presentations. It is meant to ensure you are on the right track for your final project. Your final project can evolve from these presentations.
- b) **Final Presentation (10%):** Students will present their final proposals (the rationale, research question, study design, data sources and variables, data analysis plan, expected impact and knowledge dissemination plan). Each group will have time to complete a 15-minute presentation with 5-10 minutes for questions. Feedback from your peers and instructor will help support the writing of your final proposal. Presentations will take place in class on the final day of classes.
- c) **Written proposal (40%):** The written submission is to be a maximum of 3500 words, not including references or appendices. You may include an appendix with any additional material that supports the proposal; there is no limit on the number of appendices, but these must be suitable and relevant to the proposal.

Groups will submit a written report of the proposed research, including the following sections:

1. Study introduction (1 1/2 pages)
  2. Objective/research question (1/2 page)
  3. Population and study design (1 page)
  4. Data sources and variables of interest (1 page)
  5. Data analysis (1 page)
  6. Expected impact (1/2 page)
  7. Knowledge Dissemination (1/4 page)
  8. EDI and sex/gender considerations (1/4 page)
- b) **Peer review (5%):** All of our research is reviewed by our peers (manuscripts, grants etc.). You will be assigned a written proposal for peer review. You will be assessed on the clarity, usefulness, and collegiality of the feedback you offer.

### **PARTICIPATION POLICY**

Students are expected to demonstrate professionalism by being present and punctual and by participating actively in all sessions. Students must inform the instructor if they are absent from a session because of illness or other compassionate grounds.

### **ACADEMIC INTEGRITY**

Queen's students, faculty, administrators, and staff all have responsibilities for supporting and upholding the fundamental values of academic integrity. The core values of honesty, trust, fairness, respect, and responsibility (see <http://www.academicintegrity.org>) are central to building, nurturing and sustaining an academic community where all members thrive. This course aims to uphold the values of academic integrity; students are responsible for familiarizing themselves with and adhering to the regulations concerning academic integrity. General information on academic integrity is available at [Academic Integrity @ Queen's](#), along with Faculty or School specific information. Departments from academic integrity include, but are not limited to, plagiarism, use of unauthorized materials, facilitation, forgery, and falsification. Actions which contravene the regulations on academic integrity carry sanctions that can range from a warning to loss of grades on an assignment, to failure of a course, to requirement to withdraw from the university.

**ACCESSIBILITY**

Queen's University is committed to achieving full accessibility for persons with disabilities. Part of this commitment includes arranging academic accommodations for students with disabilities to ensure they have an equitable opportunity to participate in all their academic activities. If you are a student with a disability and think you may need accommodations, you are strongly encouraged to contact the Student Wellness Centre and register as early as possible. For more information, including important deadlines, please visit <http://www.queensu.ca/studentwellness/accessibility-services>.

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**RESOURCES AVAILABLE TO YOU**

The Student Academic Success Service (SASS) offers academic support to students who wish to develop their skills in critical thinking, reading, learning, studying, writing, and self-management.

Student Wellness Services supports students' personal, academic and social development at Queen's University by providing a range of programs and services (e.g., accessibility services, counselling, physical and mental health services, and health promotion). The library offers many excellent services to enhance your learning. Career Services provides various services to students, faculty, employers, and alumni, including workshops.