

# EPIDEMIOLOGY OF HEALTH CARE, 2009/2010

CHSC 7310

## Course Description



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UNIVERSITY  
OF MANITOBA

The Manitoba Centre for Health Policy invites researchers interested in learning to work with administrative data housed at MCHP, and interested individuals in the Ministries which have provided data to the Repository to audit a course titled Epidemiology of Health Care. The course provides an overview of health services research that relies on administrative data banks. A primary focus of the course is on using data to understand key policy issues, including physician practice patterns, how the health care system functions, and the broader determinants of health and well-being including education, challenged family situations, and poverty. The course is also offered for credit to students in the Masters and Doctoral programs in Community Health Sciences.

The course will be taught by Noralou P. Roos, Les Roos, and Marni Brownell of the Department of Community Health Sciences and the Manitoba Centre for Health Policy. Participants in the course will have an opportunity to learn:

Web-based skills in searching for information. Much of the course content is available on the web at: <http://mchp-appserv.cpe.umanitoba.ca/teaching/frames.htm>

1. Basic skills in computerized statistical analysis, using SAS<sup>®</sup> software\*
2. How the files in the Manitoba Health Research Data Base are developed and structured
3. Potential research uses of the data base: what kinds of analyses can be done on the data base, what are its weaknesses and strengths, issues of validity and reliability in data base research
4. What is meant by case-mix and severity of illness, quality or outcomes of care, regional variations in utilization of services, physician practice patterns
5. How health services research can be linked to and support health/social policy development
6. How powerful it can be to combine social policy data and health data for understanding policy issues

7. Dr. Brownell will teach 2 or 3 alternative sections on research using the social databases for those interested

The course will be taught on Wednesday afternoons, from 3:00 to 5:30 pm in Room 409-727 McDermot (MCHP Offices). The course will run from September 9 to December 9. See below for when SAS workshops will be held. These will be available on first sign up basis with those enrolled for credit getting first priority.

There is no charge for persons auditing the course. Copies of reading materials will be distributed in class. There will be weekly reading assignments requiring approximately 2-3 hours to prepare for class discussion. There will also be a term paper in which the student will be expected to analyze "dummy" computer files; this is optional for students auditing the course.

If you are interested in auditing this course or would like to send someone from your organization, please complete and return the form below by mail, fax, or e-mail:

Dr. Noralou P. Roos  
Manitoba Centre for Health Policy  
4th floor, Room 408, 727 McDermot Avenue  
Winnipeg, MB R3E 3P5

Fax number: (204) 789-3910

E-mail: [Noralou\\_Roos@cpe.umanitoba.ca](mailto:Noralou_Roos@cpe.umanitoba.ca)

Graduate students who wish to register for credit should contact the Graduate Program, Community Health Sciences at 789-3655. In addition, please complete and return the form below to the above address, either by mail or by fax.

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NAME: \_\_\_\_\_

TITLE: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

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PHONE: \_\_\_\_\_

FAX: \_\_\_\_\_

E-MAIL: \_\_\_\_\_

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*\* SAS is the registered trademark of the SAS Institute.*

## **Description:**

*Computer Workshops:* Workshops focusing on an important statistical analysis computer application—SAS—will also be offered. SAS stands for statistical analysis software; it is used by the researchers and programmers at MCHP to analyze the Manitoba Health Research Data Base. The SAS Workshops together provide an overview of basic SAS techniques. Registered students should take the SAS workshops. Auditing students are encouraged, but not obligated, to take the SAS workshops in order to enhance their understanding of data issues relevant to issues discussed in the course. Location: Training room at the Manitoba Centre for Health Policy.

People taking the Epidemiology of Health Care course for credit will get priority; other spaces will be on a first come basis. There are only 8 spaces available in each session. If people are interested in the SAS workshop they should contact

Charles Burchill (Charles\_Burchill@umanitoba.ca or 789-3429).

The workshops take place in Room 412, Brodie Centre. There is limited access to the 4th floor on Saturday so everyone will have to meet prior to the course on the main floor.

The SAS course covers the following material.

- Basic introduction to the SAS interface and programming syntax
- Use of basic statistical procedures and working through the SAS documentation
- Reading raw or external data sources
- Combining data through set and merge
- Array processing
- First/Last processing

This is a SAS programming and data usage course.

1. August 24 – 28

Morning sessions 9-12 will be held

2. Saturday September 19th and 26th

These are full day sessions running from 9:00 am - 4:30 (or 5:00) each day.

3. Tuesday and or Friday (day to be specified) mornings starting September 15 for 5 sessions

Half day session running from 9:00 am - 12:00 noon.

*Web-based:* Much of the course content is available on the web at:

<http://mchp-appserv.cpe.umanitoba.ca/teaching/frames.htm>

## **Course Materials:**

Copies of the syllabus will be distributed in class. Copies of the Centre's supplements will also be distributed in class. Required readings will be distributed.

Requirements for Registered Students:

Weekly readings to permit timely class participation.

Registered students are expected to develop questions related to the readings or general topic areas (4 or 5 questions on one page) to be handed in to the instructor at the beginning of each class. For auditing students this is encouraged but optional. This will help ensure coverage of issues important to students.

Two critical review papers of approximately five pages each. Papers should provide a review and synthesis of the issues raised in the readings for a particular week and discuss both issues pertaining to use of administrative data and substantive issues. All readings should be covered in these papers. Paper topics will be chosen during the first or second week of class in consultation with the instructors. Papers will be due at the beginning of the class in which the topic is covered.

A computer exercise to demonstrate familiarity with SAS is due: Part I on October 24, tentative date (earlier if possible) and Part II on November 7 (earlier if possible). In order to do the computer exercise and research paper, students will be required to learn SAS. Think of SAS as a tool rather than an end in itself. Non-registered students are also encouraged to do the computer exercise to gain an understanding of the "programming" involved.

A research paper is due the last week of the term on a relevant topic of the student's choice. It is to be developed by conducting relevant analyses and interpretation of results using simulated Manitoba Health hospital discharge data, which will be distributed on disk. The real purpose of this paper is to enable you to learn how to use data to answer research questions. Possible paper topics include, but are not limited to:

1. comparison of hospital use across age groups;
2. description of urban versus rural hospitalization patterns;
3. characteristics of long stay cases;
4. characteristics of 1-3 day cases;
5. description of case mix across regions;
6. comparison of hospitalization for individuals receiving care in their region of residence versus those receiving care outside that region;

7. characteristics of use of intensive care units;
8. others that you may define.

First choice of a paper topic should be made in consultation with Professor Roos. The research papers should include a pertinent literature review, statement of research questions(s), methods section, results (with maximum of 10 well chosen tables) and conclusions. If a draft document is turned in 2 weeks before the due date, constructive suggestions will be made, providing an opportunity to do revisions. Papers will be due November 28th. The simulated Manitoba Health data disks must be returned at that time.

**Grading:**

Class participation and question development	10%
2 critical review papers (10 points each)	20%
Computer exercise	20%
Research paper	50%

## Readings and Questions:

### Week 1: Introduction and Course Overview Wednesday, September 16, 2009

What is meant by "epidemiology of health care"? How does it differ from traditional epidemiology? From clinical epidemiology? Relevance of the perspective used for analysis: care delivered versus care received; macro versus micro. Where does the Manitoba Centre for Health Policy (MCHP) fit?

Overview: [Studying Health and Health Care](#) (a lecture in the Epidemiology Supercourse)

Using administrative data; from the MCHP home page (<http://www.umanitoba.ca/medicine/units/mchp/>) check out each heading on the left, then explore each topic under Research Resources. How does MCHP (try to) keep track of what is going on?

- Concept Dictionary: *Administrative Databases, Secondary Data Sources*
- *Population Health Research Data Repository*
- Roos LL, Soodeen R, Bond R, Burchill C: Working more productively: Tools for administrative data. *Health Serv Res* 2003;38(5):1339-1357 [[Abstract](#)]

#### Databases and their uses:

- Black C, Roos LL, Roos NP: From health statistics to health information systems: a new path for the twenty-first century. Friedman DJ, Hunter EL, Parrish RG (eds), *Health Statistics*. New York: Oxford University Press, 2005:443-461.
- Roos LL, Menec V, Currie RJ: Policy analysis in an information-rich environment. *Soc Sci Med* 2004;58(11):2231-2241 [[Abstract](#)]
- Holman CD, Bass AJ, Rouse IL, Hobbs MS: Population-based linkage of health records in Western Australia: development of a health services research linked database. *Aust NZ J Public Health* 1999;23(5):453-459 [[Abstract](#)]

#### Manitoba Centre and other Centres:

- *MCHP CLOSE-UP, Reports, Data Repository*
- Roos NP: Establishing a population data-based policy unit. *Med Care* 1999; 37(6 Suppl):JS15-26 [[Abstract](#)]
- *Population Health Research Data Repository as of March 5, 2009*

Other Web Sites: ICES - *The Institute for Clinical Evaluative Sciences in Ontario, Centre for Health Services and Policy Research, International Health Data Linkage Network*

## Week 2: Areas and Regions

### Wednesday, September 23, 2009

What is small area analysis? What is population based analysis? Why are small area variations in the receipt/delivery of care challenging? How would you determine whether variation is "needs" driven or not? Why does variation occur? Understand implications of this equation:

Admissions per capita \* mean length of stay per admission=hospital days per capita

Compare information coming from small area analyses (per capita rates) with indicators coming from institutional data (average length of stay, occupancy rates, procedure specific death rates). How would you research whether rates in low areas are too low or rates in high areas too high?

- Roos NP, Black C, Roos LL, Frohlich N, De Coster C, Mustard C, Brownell MD, Shanahan M, Fergusson P, Toll F, Carriere KC, Burchill C, Fransoo R, MacWilliam L, Bogdanovic B, Friesen D. Managing health services: how the Population Health Information System (POPULIS) works for policymakers. *Med Care* 1999;37(6 Suppl):JS27-JS41. [[Abstract](#)]
- Frohlich N, Roos N: Commentary: Searching for El Dorado: The impossibility of finding the right rate. *Can Med Assoc J* 2002;167(8):880-881 [[Full Text](#)]
- Overview: [Providing Information to Regional Health Care Planners: A Manitoba Case Study](#) (a lecture in the Epidemiology Supercourse)
- Martens PJ, The Need to Know Team, Fransoo R, Burchill C, Burland E. Health status and healthcare use patterns of rural, northern and urban Manitobans: Is Romanow right? *Healthcare Policy* 2006;2(1):108-127. [[Abstract](#)]
- Fisher ES, et al.: Slowing the growth of health care costs – lessons from regional variation. *NEJM* 2009;360(9):849-852
- Gawande A: The cost conundrum: What a Texas town can teach us about health care. *The New Yorker* June 1, 2009:e pages 1-11 [[Full Text](#)]
- Concept Dictionary: **Small Area Analysis**
- Concept Dictionary: **Winnipeg Area Definitions**
- Look at Atlases produced from [ICES, Centre for Health Services and Policy Research](#), Center for the Evaluative Clinical Sciences, Dartmouth Medical School

### Week 3: Practice Patterns, Profiling, and Report Cards

#### Wednesday, September 30, 2009

How can administrative data be used to study physician practice patterns and quality of care? What aspects of physician practice are easy to study using administrative data? What is difficult? What useful information is available from practice profiles? What additional kinds of items might be added to these profiles? Can practice patterns be changed? What is the most convincing evidence that factors other than patient need influence how physicians practice medicine?

Over the past 20 years, there have been tremendous efforts to develop "report cards". What are the benefits of this activity? What are the problems? Should they be published? What is their impact on the public, providers and the system?

- Robinowitz DL, Dudley RA: Public reporting of provider performance: can its impact be made greater? *Annu Rev Public Health* 2006; 27: 517-536 [[Abstract](#)]
- Katz A, Soodeen R, Bogdanovic B, DeCoster C, Chateau D: Can the quality of care in family practice be measured using administrative data? *Health Services Research* 2006; 41(6):2238-2254 [[Abstract](#)]
- Frohlich N, Cree M, Carriere KC: A general method for identifying excess revisit rates: The case of hypertension. *Healthcare Policy* 2008;3(3):40-48 [[Abstract](#)]
- Cohen MM, Roos NP, MacWilliam L, Wajda A: Assessing physicians' compliance with guidelines for papanicolaou testing. *Med Care* 1992; 30(6):514-528 [[Abstract](#)] (read abstract only)
- Chan B, Anderson G, Theriault M: High-billing general practitioners and family physicians in Ontario: How do they do it? *Can Med Assoc J* 1998; 158(6):741-746 [[Abstract](#)]
- Romano P, et al: Adapting a clinical comorbidity index for use with ICD-9-CM administrative data: Differing perspectives. *J Clin Epidemiol* 1993;46(10):1075-1079 [[Abstract](#)]
- Concept Dictionary: *Complications and Comorbidities*



## **Week 4: Population-Based Clinical Research**

### **Wednesday, October 7, 2009**

Review the paper by Black et al.(Week 1) to consider the application of administrative data for studying, understanding and influencing patterns of clinical care. How have the data been used by the Maine Medical Assessment Foundation (see Keller et al.)?

Can we do better in using administrative data to study issues of interest from a clinical perspective. While it has been relatively easy to study patterns of care for specific (especially surgical) procedures, it has been more difficult to study other diagnosed clinical conditions. Limitations in coding and collection systems, coupled with weaknesses in diagnostic data, have led to an emphasis on studying surgical rather than medical patterns of care. Think about different ways to define individuals with various conditions.

- Fedson DS, Wajda A, Nicol JP, et al: Clinical effectiveness of influenza vaccination in Manitoba. *JAMA* 1993; 270(16):1956-1961 [[Abstract](#)]
- Roos LL, Walld R, Romano PS, Roberecki S: Short-term mortality after repair of hip fracture: Do Manitobans do worse? *Med Care* 1996; 34:310-326 [[Abstract](#)]
- Singh H, Turner D, Xue L, Targownik L, Bernstein C: Risk of developing colorectal cancer following a negative colonoscopy examination. *JAMA* 2006; 295(20): 2366-2372 [[Abstract](#)]
- Keller RB, Soule DN, Wennberg JE, Hanley DF: Dealing with geographic variations in the use of hospitals. *J Bone Joint Surgery* 1990; 72-A(9):1286-1293 [[Abstract](#)] (read abstract only)
- Lix L, Yogendran M, Shaw SY, Burchill C, Metge C, Bond R. Population-Based data sources for chronic disease surveillance. *Chronic Diseases in Canada* 2008;29(1):31-38. [[Abstract](#)]

## Week 5: Quality of Care and Outcomes Wednesday, October 14, 2009

Read the Grumbach et al. article to consider how outcomes assessments from clinical studies may differ from those using administrative data. What are the strengths and weaknesses of administrative data for assessing quality of care and evaluating health outcomes? Think of what things are (or would be) easy to evaluate. What is difficult or impossible? How could/should administrative data be enhanced to facilitate assessment of outcomes? What are future prospects for evaluating outcomes using routinely collected data? What are the possibilities associated with using administrative data in conjunction with more detailed clinical data?

Consider some potential applications of administrative data in quality assurance or quality improvement activities. Review design and measurement issues in using administrative data for evaluating health outcomes: comparison groups, before/after designs, length of follow-up period, case-mix adjustment, what outcomes to look at, etc.

In what ways does population-based analysis provide a different perspective from provider-based analyses in addressing quality of care?

Read Mustard's paper keeping in mind: Is more health care necessarily better? Is equal access to care an end in itself? How important is medical care at influencing outcomes? When is a difference in outcomes important? Consider differences between statistical, clinical and policy perspectives. Who are the high risk groups?

- Mustard CA, Roos NP: The relationship of prenatal care and pregnancy complications to birthweight in Winnipeg, Canada. *Am J Public Health* 1994; 84(9):1450-1457 [[Abstract](#)]
- Grumbach K, Anderson GM, Luft HS, et al: Regionalization of cardiac surgery in the United States and Canada: Geographic access, choice, and outcomes. *JAMA* 1995; 274(16):1282-1288 [[Abstract](#)]
- Roos LL, Walld R, Uhanova J, Bond R, Asch SM: Physician visits, hospitalizations, and socioeconomic status: ambulatory care sensitive conditions in a Canadian setting. *Health Services Research* 2005;40(4):1167-1185 [[Abstract](#)]
- Report Summary: **Assessing Patient Safety in Manitoba Hospitals** (June 2006)
- Report Summary: **Assessing Manitoba's Nursing Homes: Is Good Good Enough?** (October 2006)
- Yasaitis L, et al: Hospital quality and intensity of spending: Is there an association? *Health Affairs* 2009;28(4):w566-w572 [[Abstract](#)]

## Week 6: Physician Resource Analysis

### Wednesday, October 21, 2009

How can (should??) administrative data be used for physician resource planning? What are key issues in deciding the number of physicians needed? What are the implications of using ratios (physicians per 1000 population) versus utilization rates in discussions of shortages? How could we ever determine whether physicians induce demand for their services or respond to patient preferences? How can one plan for specialist as opposed to generalist physicians?

- Watson D, Slade S, Buske L, Tepper J: Intergenerational differences in workloads among primary care physicians: a 10-year, population-based study. *Health Affairs* 2006; 25(6):1620-1628 [[Abstract](#)]
- Wharry S, Sibbald B: What physician shortage? *CMAJ* 2002;167(1):64 [[Full text](#)]
- Watson D, Katz A, Reid R, Bogdanovic B, Roos N, Heppner P: Family physician workloads and access to care, 1991 to 2001. *CMAJ* 2004;171(4):339-342 [[Abstract](#)]
- Report Summary: ***Family Physicians in Winnipeg: What has Changed?*** (May 2003)
- Roos NP, Fransoo R, Bogdanovic B et al: Issues in planning for Manitoba's specialist physicians. *Med Care* 1999; 37(6 Suppl):JS229-253 [[Abstract](#)] (read abstract only)
- Concept Dictionary: ***Physician Service Areas and RHA's, Physician Service Areas***
- Roos NP, Fransoo R: How many surgeons does a province need, and how do we determine appropriate numbers? *Health Care Mgmt Forum* 2001; 14(1):11-21 [[Abstract](#)] (read abstract only)
- Welch WP, Miller ME, Welch HG, et al: Geographic variation in expenditures for physicians' services in the United States. *N Engl J Med* 1993; 328(9):621-628 [[Abstract](#)] [read abstract only]
- Goodman: New York Times July 10, 2006: Too Many Doctors in the House? [[Abstract](#)]
- Report Summary: ***Physician Resource Projection Models*** (2009)

## Week 7: Assessing System Performance

### Wednesday, October 28, 2009

A large proportion of provincial health care budgets is spent on hospitals. Assessing hospital performance is of considerable interest. There are many different aspects of acute care one might evaluate: efficiency of patient discharge, cost-efficiency of treatment patterns, appropriateness of admissions, quality of care. There is no necessary relationship across these dimensions; hospitals that perform well on one area may score poorly on others. Wait times are a major issue in the media. What would an ideal wait time be? How might it be achieved?

- Report Summary: *How Acute is Acute Care in Winnipeg?* June 2001
- Bruce S, DeCoster C, Trumble Waddell J, Burchill C: Patients hospitalized for medical conditions in Winnipeg: Canada: Appropriateness and level of care. *Healthcare Manage Forum* 2002;Winter(Suppl):53-57 [[Abstract](#)]
- Report Summary: *An initial analysis of emergency room departments and urgent care in Winnipeg (2008)*
- De Coster C, Luis A, Taylor M.: Do administrative databases accurately measure waiting times for medical care? Evidence from general surgery. *Can J Surg* 2007;50(5):394-396 [[Abstract](#)]
- Newsletter: *Quality of Surgical Care*
- Roos NP, Black CD, Roos LL, et al: A population-based approach to monitoring adverse outcomes of medical care. *Med Care* 1995; 33(2):127-138. [[Abstract](#)]

#### Optional Readings:

- Newsletter: *Patients' Views About Waiting for Surgery*

## Week 8: Use of Pharmaceuticals

### Wednesday, November 4, 2009

What are the advantages of having pharmaceutical data available for study? (Pharmaceutical data sets were added to the Manitoba Health research database in 1997.)

After reading the article by Metge et al., consider some of the possible explanations for findings of differences in use of medications across regions. How does the addition of pharmaceutical data offer enhanced potential to study quality and effectiveness of clinical care?

- Targownik LE, Lix LM, Metge CJ, Prior HJ, Leung S, Leslie WD.: Use of proton pump inhibitors and the risk of osteoporosis related fractures. *CMAJ* 2008;179(4):319-326 [[Abstract](#)]
- Report Summary: ***Controlling Prescription Drug Costs in Manitoba***
- Report Summary: ***The High Cost of High-Cost Drug Users in Manitoba***
- Morgan S, Bassett K, Wright J et al: "Breakthrough" drugs and growth in expenditure on prescription drugs in Canada. *BMJ* 2005; doi: 10.1136/bmj. 38582.703866.AE [[Full Text](#)]
- Metge C, Black C, Peterson S, Kozyrskyj A: The population's use of pharmaceuticals. *Med Care* 1999; 37(6 Suppl):JS42-59 [[Abstract](#)]
- Kozyrskyj A, Mustard CA, Cheang MS, Simons FER: Income-based drug benefit policy: Impact on receipt of inhaled corticosteroid drugs by Manitoba children with asthma. *CMAJ* 2001; 165 (7):1-7 [[Abstract](#)]

## **Week 9: Building Capacity to Measure Costs** **Wednesday, November 18, 2009**

We have never been very good at measuring costs across the Canadian health care system. We have approached this in Manitoba from different directions: comparing the costliness of different institutions, comparing expenditures on health care across different sectors for different populations and developing a cost list for different types of care and for care delivered in different sectors. Make sure you are clear on which is which in each of the readings. What types of questions does each of these approaches help to address? Can any of these be used for comparing the cost of doing gall bladder surgery at HSC versus the Grace? These are all good examples of how to work with imperfect data.

- Report Summary: *The Direct Cost of Hospitalizations in Manitoba, 2005/06*
- Report Summary: *What Drives Health Care Expenditures?*
- Jacobs P, Roos NP: Standard cost lists for health care in Canada: Issues in validity and inter-provincial consolidation. *PharmacoEconomics* 1999;15(6):551-560. [[Abstract](#)]
- Report Summary: *Managing the System with the Management Information System*
- Report Summary: *On Death and Dying in Manitoba*

### **Medical Savings Accounts and User Fees - Another Use of Cost Data:**

- Forget E, Deber R, Roos L: Medical savings accounts: Will they reduce costs? *CMAJ* 2002;167:143-147 [[Full Text](#)]
- Forget E, Roos L, Deber R, Walld R: Variation in lifetime healthcare costs across a population. *Healthcare Policy* 2008; 4(1): e148-e167.
- Myth: User fees would stop waste and ensure better use of the healthcare system (2001)

## Week 10: Using Data to Address Specific Policy Questions

### Wednesday, November 25, 2009

There are many areas where administrative data can contribute to an understanding of key policy issues. What are the strengths and weaknesses of the administrative data for enlightening each of the policy areas? What are other areas where it might be useful? Where not?

#### Managing Hospitals:

- Liu L, Hader J, Brossart B, White R, Lewis S: Impact of rural hospital closures in Saskatchewan, Canada. *Soc Sci Med* 2001;52(12):1793-1804. [[Abstract](#)] (read abstract only)
- Brownell M, Roos NP: Monitoring the impact of hospital downsizing on access to care, quality of care and the health of the population. *Med Care* 1999; 37(6 Suppl):JS135-150. [[Abstract](#)] (read abstract only)
- Doupe M, Kozyrskyj A, Soodeen R, Derksen S, Burchill C, Huq S. *An Analysis of Emergency Departments and Urgent Care in Winnipeg*. Manitoba Centre for Health Policy. Winnipeg: May, 2008. (read abstract only)
- Menec VH, Roos NP, MacWilliam L: Seasonal patterns of hospital use in Winnipeg: Implications for managing winter bed crises. *Healthcare Manage Forum* 2002;Winter(Suppl):58-64. [[Abstract](#)] (read abstract only)
- Myth: More money would put an end to emergency room crunches (2000)

#### Hospitals and Nursing Homes:

- Report Summary: *Long-Stay Patients: Who is more likely to go home?*
- Centre Piece: *Who are the big users of Winnipeg hospitals?* Spring 2003

## Week 11: Disease, Population Health and the Role of Medical Care Wednesday, December 2, 2009

What are the important factors that contribute to health? What is the role of health care in determining the health of the population?

- Roos NP, Brownell M, Menec V: Universal medical care and inequalities in health: Right objectives, insufficient tools, in Heymann J, Hertzman C, Barer ML, Evans, RG (eds): *Healthier Societies: From Analysis to Action*: New York, NY, Oxford University Press; 2006:107-131.
- Frohlich N, Fransoo R: Health service use in the Winnipeg Regional Health Authority: Variations across areas in relation to health and socioeconomic status. *Healthcare Manage Forum* 2002;Winter(Suppl):9-14 [[Abstract](#)]
- Mustard CA, Derksen S, Berthelot J-M, et al: Age-specific education and income gradients in morbidity and mortality in a Canadian province. *Soc Sci Med* 1997; 45(3):383-397[[Abstract](#)]
- Anderson GF, Frogner BK: Health spending in OECD countries: Obtaining value per dollar. *Health Aff* 2008;27(6):1718-1727 [[Abstract](#)]
- Concept Dictionary: **RECOMMENDED Health Status Indicators, Income Quintiles** (just get a sense of the steps involved), **Socioeconomic Risk Indicators**
- Mechanic D: Disadvantage, inequality, and social policy. Major initiatives intended to improve population health may also increase health disparities. *Health Aff (Millwood)* 2002; 21(2):48-59 [[Abstract](#)] (read abstract only)
- Overview: [Manitoba First Nations: Health & Health Care in an Aboriginal Population \(a lecture in the Epidemiology Supercourse\)](#)
- Report Summary: **Health and Health Care:Manitoba's First Nations** (March 2002) See: **Aboriginal Health Research and Policy**, J Pub Hlth 2005;96(Supplement 1)



**Week 12: From Health Research to Social Research**  
**Wednesday, December 9, 2009**

How might data from other Ministries help us to understand the broader determinant of health and societal well-being? We will review the databases which have been added to the Repository over the last several years from education and from social services. What other data resources might be helpful? What are the strengths and weaknesses of the social databases for undertaking research on the broader determinants of health. What do sibling studies offer researchers?

- Roos LL, Brownell M, Lix L, Roos NP, Walld R, MacWilliam L. From health research to social research: Privacy, methods, approaches. *Soc Sci Med* 2008;66(1):117-129.  
[\[Abstract\]](#)
- [The Boston Indicators Project](#)
- C Hertzman and C Power: A life course approach to human development. In Heymann J, Hertzman C, Barer ML, Evans RG (eds): *Healthier Societies: From Analysis to Action*. New York, NY, Oxford University Press, 2006.

**Week 13: Examples of Research Using Social Data Sets**  
**Wednesday, December 16, 2009**

- Roos NP, Brownell M, Guevremont A, Fransoo R, Levin B, MacWilliam L, Roos LL. The complete story: A population-based perspective on school performance and educational testing. *Can J Educ* 2006;29(3):684-705. [[Full Report](#)]
- Oreopoulos P, Stabile M, Walld R, Roos LL. Short, medium, and long term consequences of poor infant health: An analysis using siblings and twins. *J Hum Resour* 2008;43(1):88-138. [[Abstract](#)]
- Brownell M, Roos N, Fransoo R, Guevremont A, MacWilliam L, Derksen S, Dik N, Bogdanovic B, Sirski M. *How do educational outcomes vary with socioeconomic status?* Manitoba Centre for Health Policy. Winnipeg: June 2004. [[Full Report](#)]  
[http://mchp-appserv.cpe.umanitoba.ca/reports/child\\_inequalities/index.shtml](http://mchp-appserv.cpe.umanitoba.ca/reports/child_inequalities/index.shtml)
- Currie J, Stabile N, Manivong P, Roos LL: Child health and young adult outcomes, *J Hum Resour* (forthcoming)
- Oreopoulos P. The long-run consequences of living in a poor neighborhood. *Quarterly Journal of Economics* 2003;118(4):1533-1575