

Readings and Questions:**Week 1: Introduction and Course Overview
Wednesday, September 15, 2010**

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:

Roos LL, Menec V, Currie RJ: Policy analysis in an information-rich environment. *Soc Sci Med* 2004;58(11):2231-2241 [\[Abstract\]](#)

Jutte D, Roos LL, Brownell MD. Administrative Record Linkage as a Tool for Public Health Research, 2011. (Draft)

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: Small Areas Analysis

Wednesday, September 22, 2010

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 [[Full Text](#)]

Skinner J, Staiger D, Fisher ES. Looking back, moving forward. *NEJM* 2010;18:362(7) 569-74. [[Full Text](#)]

Bach PB. A map to bad policy—hospital efficiency measures in the Dartmouth Atlas. *NEJM* 2010;18:362(7) 5 [[Full Text](#)]

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](#)]

Evans RG. There's No Reason for It, It's Just Our Policy. *Healthcare Policy* 2009;5(2);14-24. [[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 29, 2010

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 6, 2010

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](#)]

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](#)]

Week 5: Quality of Care and Outcomes

Wednesday, October 13, 2010

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 20, 2010

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](#)]

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 27, 2010

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?*** (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 3, 2010

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?

Report Summary: ***Controlling Prescription Drug Costs in Manitoba***

Report Summary: ***The High Cost of High-Cost Drug Users in Manitoba***

Report Summary: ***Pharmcare and its Impact on Manitoba Costs***

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 10, 2010

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***

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***

Report Summary: ***Chronic Disease in Manitoba: What Are the Costs***

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. [[Full Text](#)]

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 17, 2010

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, November 24, 2010

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, Squires, DA. Measuring the U.S. Health Care System: A Cross-National Comparison. *The Commonwealth Fund* June 2010. [[Full Text](#)]

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: ***Métis Health Status and Healthcare Use in Manitoba***

Aboriginal Health Research and Policy. J Pub Hlth 2005;96(Supplement 1) {Copies provided by Professor}

Week 12: From Health Research to Social Research
Wednesday, December 1, 2010

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](#)

Hertzman C, Power C. 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.

Currie J, Stabile N, Manivong P, Roos LL: Child health and young adult outcomes, *J Hum Resour* 2010;45(3):517-548 [[Abstract](#)]

Hertzman C, et al. Bucking the inequality gradient through early child development. *BJM* 2010;340[[Full Text](#)]

Week 13: Examples of Research Using Social Data Sets
Wednesday, December 8, 2010

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](#)]

Oreopoulos P. The long-run consequences of living in a poor neighborhood. *Quarterly Journal of Economics* 2003;118(4):1533-1575

Roos NP, Roos LL, Brownell MD, Fuller EL. Enhancing Policymakers' Understanding of Disparities: Relevant Data from an Information-Rich Environment. *Milbank Quarterly* 2010;88(3):382-403.

Jutte D, Brownell MD, Roos NP, Schippers C, Boyce TW, Sym SL. Rethinking What Is Important: Biologic Versus Social Predictors of Childhood Health and Educational Outcomes. *Epidemiology* 2010;21(3):314-323. [[Full Text](#)]