

## GSPP 833: Performance Measurement in Health Care Organizations

University of Regina Campus	
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<b>Office Hours:</b>	By appointment
<b>Term:</b>	Winter 2010
<b>Room:</b>	CK 185
<b>Time:</b>	January 30, 9:00-11:45 am February 16-20, 9:00-3:45 pm March 6, 9:00-11:45 am

### CALENDAR DESCRIPTION

There is a need for a more strategic vision of the role that performance measurement can play in securing health system improvement. This course will present the opportunities and challenges associated with performance measurement in a framework that is clear and easy to understand.

### COURSE CONTENT AND APPROACH

The primary objective of the course will be to provide students with the introductory tools to measure and evaluate multiple outcomes in a healthcare setting including clinical outcomes, health outcomes, behavioural outcomes, service volume outcomes and customer service outcomes. The course will allow clinicians, managers and policy analysts to understand basic performance measurement principles in order to actively participate in real world settings. The course will not cover advanced epidemiological or statistical principals.

### REQUIRED READINGS

Rothman KJ. Epidemiology: An introduction. Oxford University Press; 2002. (ISBN-13: 978-0195135541)

All students are asked to read Ken Rothman's book by February 16. Please focus on the principles within the text and not the mathematics.

### SUPPLEMENTARY READINGS

Leatherman S. Performance measurement for health system improvement: Experiences, challenges and prospects. Cambridge University Press; 2010. (ISBN-13: 978-0521133487)

### EVALUATION

- |   |     |
|---|-----|
| A. Group exercise with power-point presentation | 25% |
| B. Final assignment due March 6 at 12 pm        | 75% |

## LATE ASSIGNMENTS

Five percent will be deducted each day during the first seven days after the due date. Assignments received after the seventh day after the due date will be graded F.

## STUDENTS WITH SPECIAL NEEDS

Students in the course who, because of a disability, may have a need for accommodations are encouraged to come and discuss accommodations with the instructor, and to contact the Coordinator of Special Needs Services at 585-4631.

## ACADEMIC INTEGRITY AND CONDUCT

Ensuring that you understand and follow the principles of academic integrity and conduct as laid out in the University of Regina's Graduate Calendar and the University of Saskatchewan's Guidelines for Academic Conduct is vital to your success in graduate school (available at [http://www.uregina.ca/gradstudies/calendar/policy\\_univ.shtml](http://www.uregina.ca/gradstudies/calendar/policy_univ.shtml) or [http://www.usask.ca/university\\_council/reports/archives/guide\\_conduct.shtml](http://www.usask.ca/university_council/reports/archives/guide_conduct.shtml)). Ensuring that your work is your own and reflects both your own ideas and those of others incorporated in your work is important: ensuring that you acknowledge the ideas, words, and phrases of others that you use is a vital part of the scholarly endeavour. If you have any questions at all about academic integrity in general or about specific issues, contact me and we can discuss your questions.

## COURSE SCHEDULE

### Saturday, January 30

Why are you in the JSGS? 9 am to 11:45 am

What is your clinical and employment background?

Have you ever participated in measurement or evaluation before?

Describe textbook by Rothman

Assign readings

Course overview

Expectations

Answer questions

### Tuesday February 16

What do we mean by performance measurement? 9 am to 10 am

Accountability for results... not just process

Key attributes of a performance measure

Valid, reliable, responsive, functional, credible,  
understandable and available

Performance measurement is an aspect of performance management

Performance measurement should not be punishment

Why do performance measurement? 10 am to 11 am

To set goals and objectives for organization

S.M.A.R.T.

Objectives should be specific, measurable, attainable,  
results-oriented and time bound

To understand organization's capacity to carry out work

To create opportunities for collaboration to achieve complex outcomes

To assign accountability

To improve quality

To track progress

To report on progress to multiple stakeholders

Reasons to hesitate before starting

What performance outcomes can we measure? 11 am to 12 pm

Health outcomes (ie. prevalence of heart disease)

Behavioral outcomes (ie. prevalence of smoking)

Determinant outcomes (ie. prevalence of poverty)

Clinical outcomes (ie. efficacy of surgery)

Service and volume outcomes (ie. change in surgical wait lists)

Customer service outcomes (ie. customer satisfaction)

Is measurement and evaluation valued in health care organizations? 1 pm to 3 pm

What is currently being measured and evaluated?

Review Saskatoon Health Region annual report

[http://www.saskatoonhealthregion.ca/about\\_us/documents/shr\\_annual\\_report\\_2008\\_09.pdf](http://www.saskatoonhealthregion.ca/about_us/documents/shr_annual_report_2008_09.pdf)

Review Saskatoon Health Region dashboard indicators

[http://www.saskatoonhealthregion.ca/about\\_us/documents/SHRQD-Q2-Mar2.pdf](http://www.saskatoonhealthregion.ca/about_us/documents/SHRQD-Q2-Mar2.pdf)

Review Regina-Qu'Appelle Health Region annual report

[http://www.rqhealth.ca/inside/publications/history/pdf\\_files/rqhr\\_ar\\_2008\\_09.pdf](http://www.rqhealth.ca/inside/publications/history/pdf_files/rqhr_ar_2008_09.pdf)

Review Minister of Health Mandate

<http://www.gov.sk.ca/adx.aspx/adxGetMedia.aspx?DocID=1584,1579,617,534,206,Documents&MediaID=2171&Filename=dateLetter-MinMcMorris.pdf&l=English>

Review Ministry of Health plan for Saskatchewan

Key concept: Service provision indicators versus health outcome indicators

Key concepts of performance measurement 3 pm to 4 pm

- Incorporate stakeholder input
- Promote leadership support
- Develop objectives
- Develop short term goals
- Develop long term goals
- Devise simple and manageable approach
- Provide assistance

### **Wednesday February 17**

Prior to starting, we need to know how to measure properly.

What is causation? (chapter 2) 9 am to 10 am

- Why is it important to determine causation?
  - The basis of performance evaluation
  - What is the difference between causation and association
- The causal pie model
- Causal criteria
  - Strength, consistency, specificity, temporality, biologic gradient
  - plausibility, experimental evidence

Measuring disease occurrence and causal effects (Chapter 3) 10 am to 11 am

- Risk
- Incidence
- Prevalence
- Effect measures

Types of study design

- A. Descriptive Studies 11 am to 12 pm
  - A1. Case Reports
  - A2. Case Series
  - A3. Cross Sectional
- Strengths and Weaknesses

## B. Observational Studies

### B1. Cohort (Chapter 4)

1 pm to 2 pm

Types of cohort studies

Prospective, retrospective

Selection of exposed population

Selection of comparison group

Issues in analysis and interpretation

Bias, nonparticipation, loss to follow-up

Strengths and weaknesses

### B2. Case Control (Chapter 4)

2 pm to 3 pm

Definition and theory

Selection of cases

Selection of controls

Ascertainment of disease and exposure

Issues in analysis and interpretation

Bias

Strengths and weaknesses

## C. Intervention Studies

3 pm to 4 pm

### C1. Randomized Trials (Chapter 11)

What is a clinical trial

Study structure

Protocol design

Strengths and weaknesses

### C2. Community Intervention Trials

## **Thursday February 17**

Bias in study design

9 am to 10 am

Systematic error or validity (chapter 5)

Selection bias

Information bias

Confounding bias

Random error or precision (chapter 6)	10 am to 11 am
P-values	
Confidence intervals	
Controlling for confounding (chapter 8)	11 am to 12 pm
(We will not cover the detailed mathematical analysis provided by Rothman)	
Characteristics of a confounder	
Example of confounding	
Statistical control for cofounding	
Restriction	
Matching	
Randomization	
Stratification	
Multivariate analysis (chapter 10)	1 pm to 2 pm
Interaction (chapter 9)	2 pm to 3 pm
Why can't we just ignore threats to precision and validity?	3 pm to 4 pm

**Friday February 19**

Efficacy versus Effectiveness	9 am to 9:30 am
Ideal clinical situation versus real world	
Literature Reviews, Systematic Literature Reviews and Meta-Analysis	9:30 am to 10 am
Role in designing evaluation	
Role after evaluation	
Example: Knee surgery	10 am to 11 am
1. Mosely BM, O`Malley K, Peterson NJ, Menke TJ, Brody BA, Kuykendall DH et al. A controlled trial of arthroscopic surgery for osteoarthritis of the knee. NEJM 2002;347:81-88.	
2. Kirkley A, Birmingham TB, Litchfield RB, Giffin R, Willits KR, Wong CJ et al. A randomized trial of arthroscopic surgery for osteoarthritis of the knee. NEJM 2008;359:1097-1107.	
3. Englund ME, Guermazi A, Gale D, Hunter DJ, Aliabadi P, Clancy M et al. Incidental meniscal findings on knee MRI in middle-aged and elderly persons. NEJM 2008;359:1108-1115.	

Example: Antidepressants

4. Moncrieff J. Are antidepressants as effective as claimed? No, they are not effective at all. *Can J Psychiatry* 2007;52:96-97.

5. Moncrieff J, Wessely S, Hardy R. Active placebos versus antidepressants for depression. *Cochrane database of systematic reviews* 2004, Issue 1. Art. No:

CD003012. DOI:10.1002/14651858.CD003012.pub2.

6. Kirsh I, Moore T, Scoboria A, Nicholls S. The emperor's new drugs: An analysis of antidepressant medication data submitted to the US Food and Drug Administration. *Prevention and Treatment* 2002;5:1-11.

Measurement tools 11 am to 12 pm

Valid and reliable assessment tools

Valid and reliable tools to be provided

Data dissemination, knowledge transfer and consultation 1 pm to 2 pm

How to disseminate your results

How to transfer knowledge about your findings

How to consult with affected parties to build consensus towards action

How to ensure recommendations are actually implemented

Group Exercise and Presentations 2 pm to 4 pm

Develop a study design to compare the effectiveness between anti-depressants, cognitive behaviour therapy and placebo in an adult clinical population.

What are all of the factors that you need to consider?

### **Saturday, February 20**

How to not do an evaluation 9 am to 10 am

Health Region public perception survey

[http://www.saskatoonhealthregion.ca/about\\_us/documents/shr\\_public\\_perception\\_survey2009.pdf](http://www.saskatoonhealthregion.ca/about_us/documents/shr_public_perception_survey2009.pdf)

Multiple Evaluation Scenarios Led by Instructor 10 am to 12 pm

Multiple outcomes

Clinical outcomes, health outcomes, behavioural outcomes,  
service and volume outcomes and customer service outcomes.

Multiple evaluation methods

Descriptive studies, Observational studies, Intervention studies

Multiple settings

Group discussion and class participation

Focus on transferring knowledge to student with multiple examples

Multiple Evaluation Scenarios Led by Students

1 pm to 3 pm

Areas of interest to students

What studies or evaluations do you want to do?

Group discussion and class participation

Led by students with facilitation from instructor

Summary and Course Evaluation

3 pm to 4 pm

**Saturday, March 6** Final assignment due

The province of Saskatchewan has decided to dramatically reduce waiting times for knee surgery. Your job is to design a comprehensive plan to evaluate the impact of this decision.

How will you evaluate the impact on health outcomes, clinical outcomes, service volume outcomes and customer service outcomes? How will you evaluate levels of support within the general community and among clinicians (not just surgeons)?

What is your knowledge transfer and consultation method pre and post evaluation?

What will be the impact of the intervention? What are the pros and cons of the intervention? Was the right decision made?

The report should be ten pages, double spaced, 10 Arial font.