

COURSE OUTLINE

**Health Policy and Management 857
Evaluating Outcomes of Health Care
Spring, 2006**

**Tuesday, 4:10pm - 7:00pm
University of Kansas Medical Center
1007 Orr-Major**

Michael H. Fox, ScD

Associate Professor and Interim Chair, Department of Health Policy and Management, KUMC
Research Director, Research and Training Center on Independent Living, University of Kansas
913 588-2687, mfox2@kumc.edu

KUMC Office Hours (5th Floor Student Center): 2:00pm - 4:00pm Tuesdays and Thursdays or by appointment.

TEXTS - available at the KUMC bookstore:

Required:

Wojner, A.W. (2001). *Outcomes management: Applications to clinical practice*. St. Louis: Mosby.
Kane, R.L. (2004). *Understanding healthcare outcomes research*. Second Edition. Sudbury, MA:
Jones & Bartlett.

Optional:

Risk Adjustment for Measuring Healthcare Outcomes, Third Edition

Edited by Lisa I. Iezzoni, M.D. Health Administration Press. 2003

The Six Sigma Book for Healthcare: Improving Outcomes by Reducing Errors. Robert Barry, Amy
Murcko, Clifford Brubaker. Health Administration Press. 2002

Useful websites for the course

- 1) Companion website to Six Sigma text – www.ache.org/pubs/barry/start/cfm
- 2) Agency for Healthcare Research and Quality - www.ahrq.gov
- 3) Health Legacy Partnership – www.healthlegacy.org
- 4) Cochrane Collaboration - www.cochrane.co.uk
- 5) Center for Evidence-Based Medicine - <http://www.cebm.net>
- 6) McMaster University - <http://hiru.mcmaster.ca/>
- 7) American College of Physicians - www.acponline.org
- 8) Medical Outcomes Trust - www.outcomes-trust.org
- 9) National Center for Quality Assurance - www.ncqa.org
- 10) Centers for Medicare and Medicaid Services (CMS) <http://www.cms.gov>
- 11) Measurement Excellence and Training Resource Information Center (METRIC)
<http://www.measurementexperts.org/index.asp>
- 12) Joint Commission on Accreditation of Health Care Organizations (JCAHO) <http://www.jcaho.org/>
- 13) The Leapfrog Group for Patient Safety <http://www.leapfroggroup.org/>
- 14) Univ. of North Carolina Outcome Seminars <http://www.sph.unc.edu/health-outcomes/powerpoints/speakerindex.htm>

ACCESSIBILITY

Any student in this course who, because of a disability, needs an accommodation in order to complete the course requirements should contact the instructor or the ADA/504 Coordinator (913-588-7813; TDD 913-588-7960).

OVERVIEW

Evidence-based medicine is the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients. Outcomes or effectiveness research is a tool of evidence-based medicine that is employed to evaluate health care. The goals of outcomes research are to improve the quality and cost-effectiveness of health care. This course will trace the development of the outcomes research movement, describe and provide examples of methodologies, assessment instruments and issues that guide outcomes research. It will review methods for linking research findings with clinical practice, such as clinical practice guidelines. The course will provide both an overview of outcomes issues and strategies focusing on their application as a management tool that can lead to the practical implementation of outcomes research in numerous health and healthcare venues.

Students will be asked to select a medical, pharmacological, behavioral, or population-based intervention, or a health care service they consider important enough to study in depth this semester. Both the mid-term and final reports will build upon the students' understanding of their outcomes of interest, tracing issues related to evaluating these outcomes of this intervention or service as we cover them in class. The course grade will be based on class participation (including *on-time* attendance), written weekly assignments, a mid-term report and presentation, and a draft AHRQ proposal and presentation making use of the outcome measures in a potentially fundable manner.

Learning Goals

1. Explore methods and processes for evaluating outcomes.
2. Examine the influence of organizational mission and philosophy in the evaluation of outcomes.
3. Utilize information systems to store, retrieve, and analyze data related to outcome evaluation.
4. Construct a rationale, using research and/or theory, related to outcomes evaluation.
5. Consider appropriate methods of documenting outcomes evaluation.
6. Present outcome evaluation data in a professional and scholarly manner.
7. Begin to internalize outcomes evaluation as an integral part of healthcare management and research
8. Describe the influence of accreditation/approval activities on outcomes evaluation.

Course Objectives

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

- Describe outcomes and effectiveness research to a lay person.
- Describe important outcome measures to include in a comprehensive evaluation of a healthcare or healthcare system related intervention.

- Outline a systematic approach to a comprehensive evaluation of the outcomes of a healthcare or healthcare system related intervention.
- Discuss the merits of alternative measures of the following specific outcomes within the context of a comprehensive evaluation: cost; functional ability; symptoms; mortality; and patient satisfaction.
- Discuss the relative importance of including outcomes within various domains in a specific comprehensive evaluation of a healthcare or healthcare system related intervention.
- Understand the requirements to putting together a Public Health System (PHS) research grant proposal.

COURSE REQUIREMENTS AND GRADING

Prerequisites

Previous coursework in graduate statistics and health services research is *required*.

Assignments and Class Participation (25%)

There will be six written assignments in the early part of the course. Assignments will be graded from 0-10, based upon content, composition, and on-time receipt of work. Assignments should not exceed two typed pages in length. Work submitted late without previous instructor approval will automatically have 5 points deducted if submitted within one week after its due-date. Work submitted later than one week past due-date will not receive a grade.

Class participation includes attendance, arriving to class on-time, and active, prepared participation during class sessions. ***Three unexcused absences over the course of the semester will result in an automatic drop of one grade. More than three unexcused absences will result in an automatic course drop or an assigned grade of “F” in the course.***

Mid-term Report: (25%)

Students are expected to submit a paper and make an in-class presentation summarizing a healthcare related management intervention or service of personal significance. These could be in areas of clinical practice, public health, behavioral health, nursing, health management, or any number of other areas related to the processes associated with health management or delivery. Students should present an overview of the literature on what has been done to evaluate the outcomes of this intervention or system, and develop potentially important research questions that remain to be answered, understanding the need to select an intervention or service for which some evaluations of outcomes have already taken place. This work will give students the background needed to lay the foundation for each person’s final project. ***If students share strong interests in a similar area, they will be allowed to work in small teams on this report and the final project.***

What is meant by “Outcomes Research?”

Outcomes research describes, interprets, and predicts the impact of various influences, especially, but not exclusively, interventions on "final" endpoints that matter to decision makers: patients, providers, private payers, government agencies, accrediting organizations, or society at large. These final endpoints may include:

- survival, with or without quality of life adjustment;
- positive or adverse health effect for certain condition;
- health-related quality of life; may include generic or disease specific measures;

- satisfaction with care or the performance of a health care system more broadly;
- economic burden on the patient, caregiver, payers, or society.

Both the oral presentation and the written report will be graded. The length of the presentation will depend upon our class size, but will not exceed 30 minutes, which will include time to address questions related to each student’s subject area from the class. ***The paper should be no more than 5 double spaced pages.***

Final Paper and Class Presentation (50%)

The final paper and in-class presentation involves developing a ***draft*** of a potentially fundable Agency for Healthcare Research and Quality (AHRQ) research proposal. The proposal should build upon work done for the mid-term paper and presentation in which summaries of intervention(s) were presented and potential research questions developed. You will be expected to closely adhere to the format and guidelines presented on the AHRQ website for RO1 (research projects), RO3 (small research project grants), or R18, R21 or R24 special types of grants (<http://www.ahrq.gov/fund/grantdesc.htm>). Students may work on these projects individually or in small teams. Each proposal will be completed following instructions in the PHS 398 Grant Application manual (<http://grants.nih.gov/grants/funding/phs398/phs398.html>). The following “Table 1” presents the format that each proposal should follow:

Section	Page Limit	Content
<u>Introduction</u> - New applications - Revised applications - Revised Phase I SBIR/STTR applications - Supplemental applications	Not required/Not to be submitted 3 1 1	See Instructions
<u>Research Plan</u> - Sections A-D - Sections E-J	25* * Some exclusions for competing continuation applications * SBIR/STTR: See Section V none	Text including all figures, charts, tables, and diagrams
<u>Biographical Sketches</u>	4	No more than four pages for each person listed as Key Personnel. Items A and B together may not exceed 2 pages.
<u>Literature Cited</u>	none	Complete citations, including titles and all authors
<u>Appendix</u>	none Phase I SBIR/STTR: Not permitted unless specifically requested by NIH.	No more than 10 publications (including <i>accepted</i> manuscripts); photographs (include a copy in the Research Plan); questionnaires; and other materials that do not photocopy well.
<u>PAs and RFAs</u>	Page limitations specified in the PA and RFA announcement in the <i>NIH Guide</i> take precedence.	See specific instructions in PAs and RFAs published in the <i>NIH Guide</i> .

Deadlines for Final Paper/Proposal and Presentation

March 7 Submit and present to the class your review of the literature, evidence tables, assessment of

variations in practice and review of outcomes measures in area of interest.

May 2: Final paper/proposal due. Presentations begin, to continue on May 9 and May 16th as needed.

SCHEDULE OF CLASS TOPICS, READINGS AND ASSIGNMENTS

Week 1, January 24

Background and Introduction to Outcomes

In this session, we will discuss the concepts of outcomes research: efficacy, effectiveness, and cost effectiveness. We will review the history, identify the forces that are driving outcomes research and the agencies involved in the federal medical effectiveness program. Donabedian's model for assessing quality of care will be reviewed. We will identify variations in practice and assess factors that may contribute to variations. www.sph.unc.edu/health-outcomes/powerpoints/clancy/090800/v3_document.htm

Required Readings:

1. Wojner, Chapter 1: An Introduction to Outcomes Management (pp 1-12)
- 2 & 3. Blumenthal D. Quality of Care: What is it? *NEJM*, Sep 19 1996. Vol. 335, Iss. 12; p. 891 (4 pages); The Origins of the Quality of Care Debate. *NEJM*, October 10, 1996.335, Iss. 15; pg. 1146, 4 pgs
4. Chassin MR. Improving the Quality of Care. *NEJM*, Oct 3 1996. Vol. 335, Iss. 14; p. 1060 (4 pages)

Week 2, January 31

Evidence Based Practice and Research Methodologies for Outcomes Research

Whitney Davison-Turley, MLS, Information Specialist, KUMC Library (6:00-7:00pm)

In this session, we will review guides to searching the literature and evaluating the evidence presented. The different research methods (randomized clinical trials, large simple trials, observational studies, case control studies, meta-analysis, and administrative databases) used to generate the evidence for effectiveness will be compared and contrasted. Some of the different types of biases inherent in most research will be identified and the reasons they challenge the validity of outcomes research and assessment will be identified. Finally, case examples of evidence-based reports will be provided in class from the Cochrane Collaboration, AHRQ Evidence-Based Practice Centers, or American College of Physicians Online Journals.

Required Readings

1. Wojner, Chapters 4-5 (pp. 45 – 88)
2. Kane, Chapter 1 (pp. 3 – 22)

Optional Readings

3. Wallace EZ and Leipzig RM. Doing the Right Thing Right: Is Evidence-Based Medicine the Answer? *Annals of Internal Medicine* July, 1997; 127: 92-94.
4. Lohr, K.: Rating the strength of scientific evidence: relevance for quality improvement programs *International Journal of Quality in Health Care* 2004 Feb;16(1):9-18.
5. Hess DR. What is Evidence-Based Practice and Why Should I Care? *Respiratory Care*. July, 2004, 49(7); 730-742.

Assignment #1 (due February 7th):

Using Evidence-Based Web-Sites (page 1 of Syllabus)

Download and summarize in one paragraph an evidence-based report from any of the web-sites listed on the first page of our Syllabus to discuss in class and turn in.

Week 3, February 7

Quality Indicators in Health Care: Data and Measurement Issues

Dean M. Reker, PhD, RN, Senior Research Scientist, Kansas City VA Medical Center

The objectives of this class are to: 1) define "quality" health care and 2) provide a working knowledge of currently used quality indicators in health care.

Required Readings

1. Kane, Chapters 4 & 5 (pp. 83 – 120; 123 - 164)
2. Brook RH, McGlynn EA, et.al. Measuring Quality of Care, *N Eng J Med* 335;13: 966-969, September 26, 1996.

Optional Readings

3. Reker DM, Reid K, et.al. Development of an integrated stroke outcomes database within Veterans Health Administration, *J of Rehab Research & Develop* Volume 42, Number 1, January/February 2005, pp. 77 — 92
4. Effective Clinical Practice. Performance Measures: the Destination or the Journey? *Effective Clinical Practice*, November/December 1999. [<http://www.acponline.org/journals/ecp/>]

Assignment #2 (due February 14th)

Prepare a brief summary of any **three** health care quality indicators used and collected by **any** of the following agencies:

1. Joint Commission on Accreditation of Health Care Organizations (JCAHO)
2. Commission on Accreditation of Rehabilitation Facilities (CARF)
3. American Osteopathic Association (AOA)
4. Centers for Medicare and Medicaid Research: Minimum Data Set Plus (MDS+)
5. Centers for Medicare and Medicaid Research: Outcome and Assessment Information Set (OASIS)
6. National Committee for Quality Assurance (NCQA): Health Plan Employer and Data Information Set (HEDIS).

The summary should include the following:

Who collects the data?

Why are the data being collected?

What are the indicators of quality? Include a description of data collected with examples of key variables.

Who are the consumers of the information/data/quality indicators?

What are some consequences or outcomes of high or low quality indicator scores?

Week 4, February 14th

The Use of Outcomes in Healthcare Management

Robert Lee, Ph.D., Ellen Averett, Ph.D. M.H.S.A., Department of Health Policy & Management, KUMC

In this session we will review the application of various management evaluations of health care outcomes. Cost effectiveness analysis, cost utility analysis, and cost benefit analysis are designed to aid in decision making. Because of questions about the perspectives of analyses, about the identification of alternatives to interventions, about the measurement of the costs of interventions, about the measurement of the outcomes of interventions, about discounting, and about interpretation, the contribution of economic analysis has been modest thus far. Baldrige Criteria for quality improvement will be discussed in the context of improving organizational outcomes.

Required Readings

1. Wojner, Chapters 2, 3, 9 & 12 (pp. 13 – 29; 31 – 44; 153 – 165; 193 - 204)
2. Kane, Chapter 11 (pp. 335 – 349)

Assignment #3 (due February 21st):

There are seven Baldrige criteria categories for health care: *leadership; strategic planning; focus on patients, other customers, and markets; measurement, analysis, and knowledge management; staff focus; process management; and organizational results*. In scoring applicants for the Baldrige award, judges must use one broad category labeled “Approach” that includes the following two factors:

1. Appropriateness of methods used to meet requirements;
2. Effectiveness of the use of methods and the degree to which the approach is
 - repeatable, integrated and consistently applied;
 - embodies evaluation/improvement/learning cycles;
 - is based on reliable information and data.

Please review pp. 55-59 of the 2006 Baldrige *Health Care Criteria for Performance Excellence* (http://www.baldrige.nist.gov/HealthCare_Criteria.htm and as a .pdf on our BlackBoard site) to familiarize yourself with “process” and “results” that apply to the criteria used to score items and then select a health organization you are in any way familiar with – either through work, visits to, or indirect contact. Outline methods you feel could be used to achieve an optimal score on **any one** of the above Baldrige criteria. Limit your response to no more than 2 pages.

Week 5, February 21st **Risk Adjustment**

Numerous methods are employed to try to “level the playing field” in outcomes research through the use of methods and approaches that adjust for risk among patients or populations. This session will discuss the concept of risk adjustment as it relates to outcomes measurement and practice, review selected risk adjusters, demonstrate through examples the importance and value of using this technique, and identify promising approaches that may lead to more accurate use of outcomes in both management and research.

Required Readings

1. Kane, Chapter 8 (pp. 217 – 263)
2. Chapters 2 and 3 of the “Johns Hopkins ACG (Adjusted Clinical Groups) Case-Mix System Reference Manual – Version 7.0, May, 2005
(http://www.acg.jhsph.edu/ACGDocuments/Software%20Documentation/RM_Version%207_081905.pdf)
3. Martin KE, Rogal DL, Arnold SB. Academy Health. Health Based Risk-Adjustment: Risk Adjusted Payments and Beyond. January, 2004.
4. Maciejewski ML, Liu, CF, et.al. *The Performance of Administrative and Self-Reported Measures for Risk Adjustment of Veterans Affairs Expenditures*. Health Services Research 40:3, June, 2005.

Assignment #4 (due February 28th)

Using any of the presentations from the 2005 International Johns Hopkins University’s ACG Risk Adjustment Conference to illustrate (all available at http://www.acg.jhsph.edu/ACGDocuments/2005_Conference/index_conf.htm) describe the effects of predictive modeling in possible future health reform. How would risk adjustment play a role, for example, in more intensive targeted case management settings or in more consumer-driven health care to help us achieve improved system and patient outcomes?

Week 6, February 28th

Improving Outcomes through Information Technology

Judith Warren, Ph.D., Associate Professor, KUMC School of Nursing; Director of Nursing Informatics, KU Center for Healthcare Informatics

Required Readings

1. Wojner, Chapters 7-8 (pp. 107 – 151)

Assignment #5 (due March 14th)

Briefly compare and contrast the different apparent outcomes products that appear available and their most obvious strengths and characteristics for two large health information management companies: The Cerner Corporation (<http://www.cerner.com/public/SolutionArea.asp?id=937>) and Epic Systems Corporation (<http://www.epicsys.com/Company/News.php#Safety>).

Week 7, March 7th

Mid-Term Student Presentations of Outcomes Areas of Interest - Papers due

Week 8, March 14th

Condition Specific Outcomes, including Satisfaction

Katherine Grobe, Ph.D. Assistant Professor, Department of Occupational Therapy, KUMC; Research Scientist, LifeSpan Institute, KU

Required Readings

1. Kane, Chapters 6 & 7 (pp. 165 – 216)
2. Ware, Bayliss et al. Differences in 4-year health outcomes for elderly and poor, chronically ill patients treated in HMO and fee-for-service systems. Results from the Medical Outcomes Study. *Journal of the American Medical Association*. 1996;276(1039-47)
3. Tarlov, Ware et al. The Medical Outcomes Study. An application of methods for monitoring the results of medical care. *Journal of the American Medical Association*. 1989;262(925-930).
4. Review the SF-36 web site: Try the online demo (<http://www.sf-36.org/demos/SF-36v2.html>), read the description (<http://www.sf-36.org/tools/sf36.shtml>) and print out Table 1 and the Figure titled “SF-36 Measurement Model” for reference in class.

Assignment #6 (due March 28th)

Critique the Ware article (#2) covering the following points:

1. Identify the main problem (i.e. research question). Why is the problem important?
2. Do the authors specify a theoretical or conceptual framework for the research? Is a framework implied or referenced?
3. Provide a theoretical and operational definition for each main variable.
4. What is the unit of analysis?
5. Identify an un-referenced statement that is perceived as a fact by the authors, but may not necessarily be true. What does this statement tell you about the underlying assumptions of the authors?
6. Identify whether the authors discuss the limitations of their analysis and list the limitations they identify.
7. Describe the authors’ main conclusion in one sentence. Is it consistent with the authors’ apparent beliefs about the limitations of their research?
8. What are the implications of this research?

Week 9, Spring Break (March 18th – 26th)

Week 10 (ACHE Congress), March 28th

Social Outcomes and Population Health

Required Readings:

1. Kane, Chapter 9 (pp. 269 – 303)
2. Fox MH, Averett et.al. The Effect of Health Communications on a Statewide West Nile Virus Public Health Education Campaign. *American Journal of Health Behavior* (in-press).
3. Fox MH and Kim K. Understanding Emerging Disabilities. *Disability and Society* 19;4. June 2004, pp. 339 – 353.

Week 11, April 4th

Medical Errors

Annette Kussmaul, MD, MPH, Medical Officer, Centers for Medicare and Medicaid Services, Division of Quality Improvement

Required Readings

1. Wennberg JE Understanding geographic variations in health care delivery. *N Eng J Med* 1999;340:52-53.
2. Report Brief: To Err is Human: Building A Safer Health System <http://www.iom.edu/file.asp?id=4117>
3. Lucian Leape, testimony to the U.S. Senate <http://www.apa.org/ppo/issues/sleape.html>
4. BirkmeyerJD et al. Surgeon Volume and Operative Mortality in the U.S. *N Eng J Med* 2003; 349(22):2117-2127
5. Kizer KW. The Volume Outcome Conundrum. *N Eng J Med* 2003; 349(22): 2159-2161

Week 12, April 11th (KPHA, Wichita)

Clinical Practice Guidelines as Quality Indicators

Jeffrey Wheeler, MD, JD, Associate Medical Director, Kansas Foundation for Medical Care, Inc.

The purpose of this class is to evaluate the validity of clinical practice guidelines. We will also discuss clinical and methodological issues in converting clinical practice guidelines into criteria and performance measures. We will present a class example for Post-Acute Stroke Rehabilitation Guidelines.

Required Readings

1. Kane, Chapter 10, pp. 307 -333.
2. Heinemann AW, et.al. The impact of stroke practice guidelines on knowledge and practice patterns of acute care health professionals. *Journal of Evaluation in Clinical Practice*, 9;2, 203–212
3. Villagra V. Strategies to control costs and quality: a focus on outcomes research for disease management. *Medical Care*. 42;4 suppl. April 2004, pp. III24 – III30.

Week 13, April 18th

Changing Practice Behaviors to Improve Quality of Care

Edward Ellerbeck, MD, MP, Associate Professor and Interim Chair, Department of Preventive Medicine and Public Health, KUMC

The purpose of this class is to provide an overview of how outcomes research has translated into specific instances of improved health or healthcare delivery, and how medical providers have altered their behaviors in response to these innovations. We will discuss the pathways in which improvements in clinical practice are integrated into physician and other providers' practice behaviors.

Required Readings

1. Wojner, Chapters 9 & 11 (pp. 153 – 165; 177 – 192)
2. Kane, Chapters 12 & 13 (pp. 353 – 388)

Week 14, April 25th

Individual conferences to discuss semester project

Week 15, May 2nd

Student Presentations

Week 16, May 9th

Student Presentations

Week 17, May 16th

Student Presentations if needed

