

## **Healthcare Quality Improvement and Informatics Fall 2004**

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**Class Time:** 1:00 – 2:50 PM, Monday & Wednesday  
**Class Room:** 51-279 CHS  
**Office Hours:** after class or please e-mail for appointment

### **Introduction**

Increasing competitive pressures, demands for better data on quality of care, and continued advances in computer hardware and networks will accelerate the application of broader process redesigns and comprehensive information systems in coming years. The techniques for improving workplace processes, such as performance measurement, rapid cycles, breakthrough series, and collaboratives, have benefited the productivity and quality of many organizations. In addition, advances in information technology can be combined with this process view to create organizations that differ greatly in form, function, and performance from traditional organizations improving quality, reducing error, and raising value.

Quality improvement techniques have been applied in health care after adaptation from other industries. Ongoing development of techniques to measure the structure, processes, and outcomes of health care complement will document the advancements in management practices and information technology. This course will introduce students to the concepts of health care quality measurement, process improvement, and information systems, as well as organizational aspects of their implementation.

### **Course Objectives**

The objectives of the course are:

- To provide the student with a basic understanding of the principles of quality measurement, improvement, and operations process as applied in practice.
- To provide theories for understanding the organizational context within which new management practices are applied.
- To convey fundamental technical knowledge, conceptual frameworks, and terminology for the student to become an informed user and manager of information systems.
- To penetrate informatics and information systems interface with organizations and can be used to improve organizational performance

### **Textbook and Readings**

The required texts for the class are:

CP McLaughlin and AD Kaluzny, *Continuous Quality Improvement in Health Care*, 2<sup>nd</sup> Edition, Gaithersburg, MD: Aspen, 1999.

Johns, Merida L, Information Management for Health Professions, 2nd Ed., Albany, NY: Delmar Thomson Learning, 2002.

Supplemental handouts or downloads

Materials should be read before class so that students can participate fully in the discussions.

### Course Methodology

Conceptual frameworks, context, and applications will be presented by the instructors through lectures, discussion, visiting speakers, and computer demonstrations supplemented by readings. Analyses of cases will allow the students to apply this knowledge to real organizational examples. Theory and content will be expressed in class, cases, and examinations.

**Prerequisites:** Summer internship or equivalent work experience

### Grading

Grades will be based on class participation and performance on the following assignments:

1. Verbal discussion of three cases in class (format will be distributed).
2. Written outlines of individual analyses of cases 1 or 2 and 4, due before discussion.
3. Quality improvement examination--take home
4. Information systems examination—during finals week
5. Specified contribution to the class selected from list of choices.

Points may be accrued as follows:

<u>Activity</u>	<u>Written</u>	<u>Verbal</u>
Case 1: QI	5	5 discussion
Case 2: QI	5	5 discussion
Case 3: QI	10	team
QI examination: short answer	15	
Initiative: QI/IS		10 team presentation
Case 4: IS	5	5 discussion
IS examination	25	
Contribution to course	10	team/individual
Total	<u>65</u>	<u>10</u> <u>25</u>
<u>TOTAL</u>	<u>100</u>	

### Class Calendar

Day	Date	Topics	Readings/Assignment	Faculty
1 Mon	10/4	Introductions, syllabus review Activities, case study analysis	Video: Escape Fire	Parkerton/Luck D. Berwick

2 Wed	10/6	Concepts, techniques Quality and its measurement	MK, Chap. 1-3	Parkerton
3 Mon	10/11	Customer focus, Teams	MK, Chap. 5	Parkerton
4 Wed	10/13	<u>QI Case</u>	<b>Case 1 due/discuss</b> MK Case 6	Parkerton
5 Mon	10/18	Data-driven analysis	M/K, Chap. 4 Kaiser-Permanente	Luck P. Albert, MPH
6 Wed	10/20	Seven tools, statistical analysis	<u>Initiative 3 form team</u>	Luck
7 Mon	10/25	Info systems overview; Digital info; Hardware & software	Johns, Chap. 1, 2	Luck
8 Wed	10/27	Computer networks & the Internet; Info system security	Johns, Chap. 9	Luck
9 Mon	11/01	<u>QI case</u> : Business Case-Group Perspectives, Collaboratives	<b>Case 2 due/discuss</b> Pdf file	Class Parkerton
10 Wed	11/03	Why not just change?	MK, Chap. 8 <u>Distribute Exam</u>	Parkerton
11 Mon	11/08	Change process in Integrated system	MK, Chap 7 Kaiser-Permanente	N. Hays MPH Parkerton
12 Wed	11/10	Improve quality in academic health system	UCLA Health System	T. Rosenthal MD Parkerton
13 Mon	11/15	Informatics development	<b>Case 3 due</b>	Luck
14 Wed	11/17	Database and data sharing concepts	Johns, Chap. 6 <b>Exam short ans. due</b>	Luck G. Moore MPH
15 Mon	11/22	Quality/Informatics Initiatives	<b>Initiative 3 present</b>	class
Wed	11/24	Thanksgiving, no class		
16 Mon	11/29	Electronic medical records E-health overview	Johns, Chap. 3	Luck Guest speaker
17 Wed	12/01	IS development, HIPAA	Johns, Chap. 4, 5	Luck
18 Mon	12/06	<u>Informatics Case</u> : IS health care applications	<b>Case 4 due/discuss</b>	Luck
19 Wed	12/08	Quality/Informatics Mandate		Parkerton/Luck
	12/	<u>Informatics examination</u>	<b>Examination</b>	Luck