Fall 2010

15.967 Large Scale Healthcare Delivery Systems

Course Announcement

Faculty

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Objectives

This course is motivated by the ongoing public debate on the rising costs of healthcare delivery systems in the United States. The new healthcare bill recently approved by the congress does not discuss the implementation issues in details, and leaves it as a fundamental challenge in the coming years. There is a growing understanding in the governmental and private sectors that the future of the healthcare system in the United States largely depends on the ability to deliver healthcare through markets, systems and processes that are better designed to keep costs under control, and increase the access to care as well as the quality of care.

The focus of this course is on large-scale healthcare delivery systems, such as large academic hospitals and medical centers. These organizations constitute an important part of the core infrastructure of the national healthcare system. Unfortunately, the healthcare industry in the United States is highly heterogeneous, non standardized and very complex. The goal the course is to provide the students a broad perspective of the various central system issues in healthcare delivery at the United States. In particular, the course will focus on the following aspects:

1) **The financial and organizational structures and incentives in the healthcare industry:** How do various players (hospitals, doctors and medical professionals, insurance companies and patients) interact? How do the resulting organizational structures and incentives drive healthcare delivery systems design and operations?

2) **Major system design and operational challenges**. In this context we will discuss among others:

   - The impact and the sources of variability in healthcare delivery systems: (i) *unpredictable* (unavoidable and cannot be predicted), (ii) *predictable* (unavoidable but can be predicted) and (iii) *artificial* (set by the system design and its processes).
   - Specialization of resources: Tradeoffs of performance and costs in specializing vs. generalizing resources (nurses, doctors, beds).
   - Potential alternative system designs.

3) **Data and analytically driven healthcare delivery**:
   How to use data-driven, analytical and scientific business approaches to obtain better (financially and medically) system performance.

Format

The course will be based on lectures, outside speakers from the healthcare industry and case studies. We will leverage material and hands on 'field' examples from the ongoing collaborative projects of Sloan faculty and major hospitals in the Boston area, such as MGH, Children's and Brigham and Women Hospitals.

Who could benefit from the course?

1) Students who are interested in understanding the major issues in the design and operations of large scale healthcare delivery systems.

2) Students who are interested in a healthcare related career path, either directly at the healthcare industry or in consulting positions.

3) Students who are interested to do research or process improvement work in healthcare organizations.

Grading

This is a 9 unit course with a final grade. There will be no final exam, and grading will be based on several assigned case studies, a final project, as well as class participation.

Prerequisite

15.060 (DMD) or equivalent, 15.761 (Intro to Ops) or equivalent, by instructor approval.

When/Where

E51-345, fall 2010 - MW 10–11:30