

Learning and quality innovation in health care (HCq)

DRAFT

Spring 2014, IRGN 490H, Section ID 806364

Professor Roger Bohn

Monday and Wednesday, 9:30 to 10:50

Class will be held in *RBC 1428*. This is a change.

General Information

Office = RBC 1411. Phone and SMS (858) 381-2015.

Email on First Class or Rbohn@ucsd.edu. Please put HCq in the subject line.

Office hours Monday 5 to 6PM in RBC 1411; Wednesday 5 to 6PM at Peet's coffee, or by appointment. Use SMS to request appointments.

Use *First Class* for class discussion and communication.

Textbooks and other material

- We will have a custom case pack from Harvard, with about 8 case studies.
- Other readings will be academic articles, available through the UCSD library. An easy way to find them is often through scholar.google.com. Look for "UC e links" buttons.
- Occasional hand-outs in class. If you have to miss a class, be sure you get copies.
- I will assign chapters from several books that are available, used, for \$5 to \$10 each online. In light of their low prices, consider buying the whole book.
- If you have not already done so, consider signing up for 6 months of free Amazon Student service. (A renamed version of Amazon Prime.) The main benefit is free 2 day delivery of anything from their own warehouses. You can use [this URL to sign up](#), which will have modest benefits to the class that I will explain.

Recommended book list. I will provide at least one copy to borrow, but consider buying them.

- *Safe Patients, Smart Hospitals: How One Doctor's Checklist Can Help Us Change Health Care from the Inside Out* Peter Pronovost (Author), Eric Vohr (Author) http://www.amazon.com/Safe-Patients-Smart-Hospitals-Checklist-ebook/dp/B0030CVQ9E/ref=sr_1_1
- *The Checklist Manifesto: How to Get Things Right* by Atul Gawande http://www.amazon.com/gp/product/0805091742/sr=1-1/qid=1396225996/ref=olp_product_details
- *Designing Care: Aligning the Nature and Management of Health Care* Richard M. J. Bohmer http://www.amazon.com/Designing-Care-Aligning-Nature-Management/dp/142217560X/ref=sr_1_1

Who should take this course?

Health care in the US currently kills an estimated 400,000 people per year through errors of various kinds. The sector accounts for 17% of US gross domestic product. Health care organizations are under unprecedented pressure to improve efficiency, quality, and performance. As a result, organizations in the industry are trying hard to manage their operations better. This course therefore serves three purposes:

- It is an advanced elective on operations management, emphasizing quality in service operations. We will examine how to take these traditional, poorly operating, non-profit services, and bring them (closer) to modern standards of quality and performance.
- It is an introduction to the health care industry, which at 17% of the economy is the second-largest sector of the US. (The largest is education.) Demand for people in this sector continues to outstrip supply, and growth will continue, so it's a good sector for job hunting.
- If you or someone close to you are a frequent user of health care, it will provide a lot of insight. Most health care systems are poorly designed for patients, and we will emphasize patient-centered analysis. We will discuss a lot of health and safety hazards built into current health care, especially in hospitals.

Requirements and Grading

With a small number of students, the course will be run in seminar style, with discussions of articles and case studies. Grades are based on several kinds of work.

- Class discussion, including formal presentations of papers you have read, to the class. (30 to 40% of final grade.)
- Short case write-ups. Contrary to the usual pattern, the write-ups are due the class *after* the case discussion. This provides time to further research tools and issues for the case. (About 20%)
- Project. Each student will choose a project, and write a paper about it. Topics can be a particular disease, a recent technology, an operational problem at a real organization, or a new approach to a class of problems. Whatever the topic, discuss how it has been dealt with or used in the past, difficulties encountered, and where it should go in the future. Pieces of the paper will be due before the end of the course. Students may collaborate on the research, but everyone must turn in their own paper and do their own final presentation. (40 to 50% of the final grade.)

Schedule

Here is the summary schedule. Weekly assignments will be posted on First Class.

Week	Tues.	Topic	Comments
1	April 1	Introduction; high-level performance measures	
2	April 8	Standardizing service processes: a way to improve the average and reduce variation	Aviation standardized processes in 1950s
3	April 15	Designing service systems	Richard Bohmer book
4	April 22	Six sigma /TQM and other “quality” tools	Root cause analysis, SPC
5	April 29	Six sigma week B	
6	May 6	Creating learning organizations	Toyota Production System
7	May 13	Looking at a disease: diabetes	
8	May 20	Student-selected topics	Info tech; pharma; R&D; regulation; local company; personal healthcare tech
9	May 27	(Memorial day) Loose ends	
10	June 3	Presentations	

Other Information

Some services are much farther in the pursuit of quality than others. Within health care, anesthesiology is conspicuously better than surgery, for example. Mass services (fast food) are generally good, but their situations are obviously much simpler.

One industry that is often proposed as a model for health care is aviation. And indeed, flying used to be more dangerous than surgery, but is now much safer. In some ways, health care today is about where aviation was in 1940. So, we will look carefully at how aviation got to its present level of performance and safety.

For Wednesday, April 2

• Look at Dartmouth Atlas of medical practices <http://www.dartmouthatlas.org/>.
DUE: Choose one example from the atlas to lead the class through a demo, and to discuss the implications.

• Read latest estimate of medical deaths. What do you think about the implications of this paper?

“A New, Evidence-based Estimate of Patient Harms Associated with Hospital Care”
http://journals.lww.com/journalpatientsafety/Fulltext/2013/09000/A_New_Evidence_based_Estimate_of_Patient_Harms.2.aspx#

Here is a press article about the James study: <http://www.propublica.org/article/how-many-die-from-medical-mistakes-in-us-hospitals>

• Skim the original NAS report on safety.

Kohn LT, Corrigan JM, Donaldson MS, eds. *To Err Is Human: Building a Safer Health System*. Washington, DC: National Academies Press; 1999. This report still has a lot of influence.

Also skim the sequel: Hurtado MP, Swift EK, Corrigan JM, eds. *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, DC: National Academies Press; 2001.