

U N I V E R S I T Y of
HOUSTON

C. T. BAUER COLLEGE of BUSINESS
Fundamentals of Healthcare
MANA 7397-02

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Course Objectives

1. Understand the components of the United States healthcare system and the challenges it is facing.
2. Appreciate the healthcare system's efforts to increase value by increasing quality while decreasing cost through organizational behavior, operational, strategic, technology and policy changes.
3. Consider the effects of the COVID-19 pandemic on the US healthcare system.

Course Description

The healthcare system in the United States is massive, complex and dysfunctional. This course will serve: 1) as an introduction to students interested in leading healthcare organizations; 2) for any student who wants a better understanding of the US healthcare system; and 3) for students more generally interested in operational and strategic decision making in a complex industry. No healthcare background is assumed or necessary.

We will describe the providers and the financial system that comprise healthcare, and the challenges healthcare faces. Next, we will turn to important opportunities for healthcare executives to alter the current value equation through changes in organizational behavior, operations, strategy, technology and policy. Finally, we will consider the short- and long-term effects of the COVID-19 pandemic on an already strained system.

Required Textbook

The Health Care Handbook: A Clear and Concise Guide to the United States Health Care System, 2nd Edition, Elisabeth Askin MD and Nathan Moore, MD.

Course Packet

The course packet contains all the cases and articles that will be assigned during the course.

Course Structure

Our class will meet thirteen times on Wednesday evenings. Check the Sessions section below to make sure you are prepared for online quizzes and case discussions, and to make sure that all assignments are turned in timely.

Grading

The final grade for this class depends on the following five components.

1. Reading Quizzes – 10% of Grade

Individual project. There will be six in-class closed book quizzes, multiple choice, only from the assigned *The Health Care Handbook* textbook readings. Please see schedule for Quiz dates.

2. Homework Problems – 20% of Grade

Individual project. There will be a Homework problem for each Module. Please complete each homework assignment, maximum two pages, double spaced, using Times New Roman 11 font, and submit as a pdf in Blackboard. Include the title of the homework, your name, and your student ID number at the top of the page. You do not need to repeat the questions asked, just indicate the subpart you are answering by use of 1., 2., etc. Please see the schedule for Homework due dates. Please refer to the Homework Assignments, Appendix B, for specifics.

3. Consulting Paper – 30% of Grade

Group project. You will be assigned a case involving a growing healthcare system. You will need to provide actionable advice to the system as if you were engaged as a consultant. Please refer to Consulting Paper, Appendix C for specifics. The Consulting Paper should be a maximum of six pages, double spaced, using Times New Roman 11 font, not including appendices. The case name, your names and your student ID numbers should appear at the top of the first page. Submit your paper as a pdf in Blackboard. Please see schedule for due dates.

4. Key Case Questions – 40% of Grade

Individual project. You will be responsible for answering questions based on the Key Case assigned each module. The answers to the Key Case Questions should be a maximum of three pages, double spaced, using Times New Roman 11 font, not including any appendices. You do not need to repeat the questions asked, just indicate the subpart you are answering by use of 1., 2., etc. The case name, your name and your student ID number should appear at the top of the first page. Submit as a pdf in Blackboard. Please see schedule for due dates. Please see Appendix D for details.

5. Class Participation – Bonus

I will use participation during our weekly sessions as a potential curve. Please note that I will frequently call on you for your input or opinions, so be prepared. Please review Appendix A for details.

Attendance Policy

Students are expected to attend all class sessions and complete all assigned work. Please note that repeat late arrivals or early departures from class may also be counted as an absence. Completion of your assigned homework and case study responses are essential to your success in the course. Any incomplete work reduces your learning opportunities, will negatively impact your grade and negatively affects the interactive process with other students. If extraordinary circumstances prevent attendance or the timely completion of assignments, the student should consult the course faculty to inquire about options that may exist. The decision to allow alternatives is at the full discretion of the faculty member.

Honor Code

This course will be conducted in accordance with the University of Houston Academic Honesty Policy and the Bauer College Code of Ethics and Professional Conduct.

Professor Evaluation

The C.T. Bauer College of Business has a policy for its instructors to be evaluated by students to provide feedback on how their teaching performance can be improved. I encourage you to participate in the evaluation process. I am available throughout the course to receive any informal input. I rely on your input to improve the class each time I teach it.

Disability-Based Accommodations

The C.T. Bauer College of Business would like to help students who have disabilities achieve their highest potential. To this end, students must register with the Center for Students with Disabilities (CSD) (Telephone 713-743-5400) It is the mission of the Disability Resource Center (DRC) to be committed to providing access to the educational environment for students. Students who may need accommodations should contact the DRC to discuss their needs and begin the registration process.

Sessions

MODULE ONE - VALUE

Textbook: Introduction, Chapter 1, Chapter 6

Readings: The Market for Healthcare
The Challenge Facing the US Healthcare System
US Healthcare Reform: International Perspectives
Virginia Mason Medical Center (Abridged) - skim

Homework: Volume to Value (Homework due prior to class on Sep 9)

Key Case: Cincinnati Children's Hospital Medical Center
(Case Questions due prior to class on Sep 9)

Modules: 1.1 Introduction to Course
1.2 COVID-19 Pandemic
1.3 Is Healthcare a Business?
1.4 Size and Complexity

1.5 Healthcare Challenges
1.6 Value in Healthcare
1.7 Healthcare in Other Countries
1.8 Homework Assignment: Volume to Value
1.9 Textbook Quiz One
1.10 Textbook Comments
1.11 Reading Comments
1.12 Key Case: Cincinnati Children's

Schedule: Aug 26 Introduction to Course
Sep 2 Lecture on Value, Quiz One
Sep 9 Homework One due before class start
Case Question answers due before class start
Cincinnati Children's Case Discussion

MODULE TWO – QUALITY

Textbook: Chapter 3 (Quality Section)

Readings: Health Care's Service Fanatics
Mistake-Proofing Healthcare: Why Stopping Processes May Be a Good Start
Queen Mary Hospital: Fighting the SARS Crisis
Clinical Change at Intermountain Healthcare - skim

Homework: Leapfrog Analysis (Homework due prior to class on Sep 23)

Key Case: Dartmouth-Hitchcock (Case Questions due prior to class on Sep 23)

Modules: 2.1 Previous Class Review
2.2 What is Quality?
2.3 Zero Harm
2.4 Evidence Based
2.5 Patient Centered
2.6 Homework: Leapfrog Analysis
2.7 Textbook Quiz Two
2.8 Textbook Comments

2.9 Reading Comments
2.10 Key Case: Dartmouth-Hitchcock

Schedule: Sep 16 Lecture on Quality, Quiz Two
Sep 23 Homework Two due before class start
Case Question answers due before class start
Dartmouth-Hitchcock Case Discussion

MODULE THREE - COST

Textbook: Chapter 2

Readings: How Not to Cut Health Care Costs
How to Solve the Cost Crisis in Health Care
Shouldice Hospital Limited - skim
Time-Driven Activity Based Costing

Homework: TDABC Analysis (Homework due prior to class on Oct 7)

Key Case: Schon Klinik (Case Questions due prior to class on Oct 7)

Modules: 3.1 Previous Class Review
3.2 Healthcare Cost Concerns
3.3 Lean
3.4 Population Health
3.5 Time-Driven Activity Based Costing
3.6 Homework Assignment: TDABC Analysis
3.7 Textbook Quiz Three
3.8 Textbook Comments
3.9 Reading Comments
3.10 Key Case: Schon Klinik

Schedule: Sep 30 Lecture on Cost, Quiz Three
Oct 7 Homework Three due before class start
Case Question answers due before class start
Schon Klinik Case Discussion

MODULE FOUR – INNOVATION / DATA ANALYSIS

Textbook: Chapter 3 (Health Information Technology Section) and Chapter 4

Readings: Why Healthcare Innovation is so Hard

Telehealth is Improving Health Care in Rural Areas
Data Analytics at Alexandra Health System
3 Entrepreneurs Who Made It Their Mission to Lower Health Care Costs
Applications of Business Analytics in Healthcare – skim

Homework: Using Predictive Analytics to Improve Quality and Reduce Costs
(Homework due prior to class on Oct 21)

Key Case: PatientsLikeMe (Case Questions due prior to class on Oct 21)

Modules: 4.1 Previous Class Review
4.2 Are Innovation and Data Analysis Game Changers?
4.3 Innovation
4.4 Pharmaceutical Industry
4.5 Medical Device Industry
4.6 Technology Assignment
4.7 Data Analysis
4.8 Homework: Data Analytics Program
4.9 Textbook Quiz Four

4.10 Textbook Comments
4.11 Reading Comments
4.12 Key Case: PatientsLikeMe

Schedule: Oct 14 Lecture on Data & Innovation, Quiz Four
Oct 21 Homework Four due before class start
Case Question answers due before class start
PatientsLikeMe Case Discussion

MODULE FIVE – LAW AND POLICY

Textbook: Chapter 3 (Medical Malpractice Sections) and Chapter 5

Readings: One Proven Way to Improve U.S. Health Care: Expand Medicare Advantage
The Case for the Public Option over Medicare for All
Obesity Management at Kaiser Permanente
Hawkins v. McGee
Four Statutes

Homework: Wrong Injection (Homework due prior to class on Nov 11)

Key Case: The Dana-Farber Cancer Institute (Case Questions due prior to class on Nov 11)

Modules: 5.1 Previous Class Review
5.2 Health Law Regulation

- 5.3 Four Statutes
- 5.4 Medical Malpractice
- 5.5 Hawkins v. McGee
- 5.6 Healthcare Policy and Reform
- 5.7 The Limits of Healthcare
- 5.8 Homework: Wrong Injection
- 5.9 Textbook Quiz Five
- 5.10 Textbook Comments
- 5.11 Reading Comments
- 5.12 Key Case: Dana Farber

Schedule: Oct 28 Lecture on Law & Policy, Quiz Five
 Nov 4 Four Statutes and Hawkins v. McGee
 Nov 11 Homework Five due before class start
 Case Question answers due before class start
 Dana – Farber Case Discussion

MODULE SIX – STRATEGY

Textbook: Chapter 3 (Culture Section)

Readings: Note on Strategic Decision-Making in Healthcare
 The Strategy that Will Fix Health Care
 Business Preparedness for Pandemic – skim

Homework: Air Ambulance (Homework due prior to class on Dec 2)

Key Case: Oak Street Health: A New Model of Primary Care (Questions due prior to class on Dec 2)

Modules: 6.1 Previous Class Review
 6.2 Business Strategy Basics
 6.3 Healthcare Strategy
 6.4 COVID-19 Pandemic Revisited
 6.5 Homework: Air Ambulance
 6.6 Textbook Comments
 6.7 Reading Comments
 6.8 Key Case: Oak Street Health
 6.9 Course Summary

Schedule: Nov 18 Lecture on Strategy, Quiz Six
 Dec 2 Homework Six due before class start
 Case Question answers due before class start
 Oak Street Health Case Discussion and Course Wrap-up

Dec 6 Consulting Paper due at midnight

Appendix A

Live Session Expectations

High/Above-Average Contributions Assessment Criteria:

- Contributions reflect thorough or exceptional preparation.
- Ideas offered are usually or always substantive, provide one or more significant insights and provide above average or highly productive direction for discussion among classmates.
- Challenges to the ideas of others, including authors of assigned readings, are well-substantiated and often or always presented persuasively.
- If this person were not present in our class sessions, the quality of discussion would be diminished markedly.

Medium/Average Contributions Assessment Criteria:

- Contributions reflect satisfactory preparation.
- Ideas offered are sometimes substantive, provide generally useful insights but seldom offer new and substantive direction for discussion among fellow classmates.
- Challenges to the ideas of others, including authors of assigned readings, are sometimes wellsubstantiated and sometimes presented persuasively.
- If this person were not present in our class sessions, the quality of discussion would be diminished.

Low/Below-Average Contributions Assessment Criteria:

- Contributions reflect inadequate preparation.
- Ideas offered are seldom substantive, provide few, if any, insights and, at times, take the classroom discussion in an unproductive, insightful direction.
- Integrative comments and effective challenges are rare or absent.
- If this person were not present in our class sessions, the quality of discussion would not be changed or might improve.

Appendix B

Homework Assignments

HOMEWORK ONE - Volume to Value

You are the Administrator of Omega Health in Central City. Omega Health is a large for-profit, multidisciplinary clinic which provides a range of primary and specialized care. The clinic is owned by five physicians in the group. All your patients come from a single contract with the Alpha Group, a consortium of large businesses in Central City. Alpha Group has agreed to pay you \$100 per visit on a fee-for-service basis.

Assume you have the following data from the prior year:

Patient Visits:	75,000
Revenue:	\$7,500,000
Variable Costs:	\$2,000,000
Fixed Costs:	\$5,000,000

For the coming year, assume one of these three scenarios:

- a. A new insurer Beta wants to contract with you to cover its insureds, which would increase visits by 15,000 per year (to 90,000) and Beta will pay the same amount per visit as Alpha. You can accommodate the increased number of patients without any changes to the size of the clinic or its equipment.
- b. The Mayor informs you that Central City, with a federal grant and a donation from Alpha, is starting free health fairs and employee health programs which are expected to dramatically improve the health of Central City's workforce. Indeed, Omega Health's mission statement is to "Improve the Health of Central City". You estimate that your patients' improved health will reduce patient visits to 50,000 per year.
- c. Alpha wishes to end its fee-for-service payments, and instead to negotiate a "Value Program" with a capitated payment of \$7,500,000 per year, irrespective of the number of patient visits.

QUESTIONS:

1. How much profit did Omega make last year?
2. What is Omega's profit if it enters into the Beta contract?
3. Assume you do not get the Beta contract. Are you excited about the Mayor's initiative? What effect is the Mayor's plan going to have on your profitability? If the owners want to maintain the current level of profitability and you cannot change the variable costs or renegotiate your contract with Alpha, what has to change and by how much?
4. Assume the Mayor's program is delayed, and you still do not have the Beta contract. If you entered into the capitated payment contract with Alpha, how many patient visits do you want to maximize your profitability? Does this change your enthusiasm for the Mayor's program?

HOMEWORK TWO – Leapfrog Analysis

The Leapfrog Group assigns quality scores to hospitals on an A to F scale. The federal government's Medicare program assigns quality scores on a five-star to one-star basis.

1. Go to <https://www.beckershospitalreview.com/quality/where-are-the-8-leapfrog-f-hospitals.html> and choose a facility that received a grade of "F" by Leapfrog.
2. Review the chosen hospital's report card on the Leapfrog site. As a new administrator, what three issues would be your highest priority to improve quality? What steps would you take to address these quality issues?

3. Look up your chosen hospital on the Medicare.gov hospital compare website. Is the final grade by Medicare consistent with the Leapfrog grade? Can you tell why?

HOMEWORK THREE – TDABC Analysis

You are the administrator of a clinic. Assume you perform a TDABC analysis on your institutions 3000 patients with a certain level of significant renal (kidney) failure. These patients on average are seen quarterly in the renal clinic and on average need to be hospitalized twice a year. You run a pilot study to evaluate the effect of seeing a subset of patients monthly and begin a telemedicine program.

You determine the following costs from your TDABC analysis:

- Average hospitalization cost = \$40,000
- Average long (standard) clinic visit cost = \$300
- Average short clinic visit cost = \$200
- Telemedicine check cost = \$20

Your data shows that patients seen quarterly for clinic visits are hospitalized twice per year on average, while those seen monthly are only hospitalized once. Your data further shows that patients who receive four short telemedicine checks a month only need short clinic visits.

- a. You are interested in reducing the cost of care of your renal failure patients. How would the total cost of care change for your 3000 renal patients if you moved all patients to monthly visits and telemedicine checks? Putting aside cost, do you think quality would improve? If so, in what ways? How would you measure any quality change?
- b. What if a \$10 per month monitoring device with daily data uploads, twice a month telemedicine checks, and quarterly short clinic visits also reduced hospitalizations from two to one per year. Now what would be the total cost of care for your 3000 patients?

HOMEWORK FOUR – Data Analytics Program

Review the Jeff case study. Assume you are the Chief Operating Office of a large county-wide hospital and clinic system.

1. Briefly describe a healthcare system design that would use clinic visits and data analytics to improve the quality and cost of care for a given population of 1000 patients with similar medical problems and life circumstances to Jeff.
2. Assume the predictive analytics project and monitoring hardware/software/staffing cost \$500,000 per year for a program involving 1000 patients at risk for complications like Jeff. Can you justify the implementation of such a project on a qualitative basis? Can you justify the implementation on a quantitative cost benefit?
3. Do you think a system of clinic visits and data analytics would be sufficient to care for patients like Jeff? What else might your system need to offer to maximize the quality and reduce the cost of caring for patients like Jeff?

HOMEWORK FIVE – Wrong Injection

You are the director of a general outpatient clinic. You have just been notified by the medical staff that there has been a patient care problem. Here are the facts. Paul Parr came to the clinic today with a severe skin rash, likely from an encounter with poison ivy doing volunteer yard work at a neighborhood park. Doctor Davis, concluding that a topical ointment might not be sufficient, decides to order an injection of 2 ml of Depo-Medrol. Depo-Medrol is a steroid, and such an injection lasts about two weeks. Drugs are arranged on the clinic pharmacy shelves alphabetically. Nurse Nuance takes the vial of medication and injects 2 ml. Only after the injection is complete and Mr. Parr is awaiting discharge from the clinic does she realize that the drug she injected was Depo-Provera, not Depo-Medrol. Depo-Provera is a progesterone contraceptive drug that lasts about 12 weeks and prevents pregnancy. The patient has not received any Depo-Medrol, the drug that was ordered. Mr. Parr is waiting and has not been told of the error. Dr. Davis and Nurse Nuance want to know what to do.

As the director of the clinic, outline the steps you will take today and going forward to address this issue.

HOMEWORK SIX – Air Ambulance

You are the CEO of a major not for profit academic healthcare institution and the referral hospital for smaller hospitals receiving complicated trauma and medical patients.

Your VP of Operations is considering the formation of an air ambulance program using helicopters to transport trauma victims from scenes (e.g. motor vehicle accidents or shootings) as well as patients from smaller outlying hospitals who need a higher level of care (e.g., a patient at a small hospital with pneumonia who now needs complex ICU care). The air ambulance system could cover your county and the five surrounding counties. Currently, emergency transportation in your county is by a county government run EMS system and a small number of private ambulance services. Significant traffic congestion in your community often results in delays in transport.

Before embarking on the project, who are the stakeholders you would want to approach and what arguments would you use to achieve buy in from each group? What resistance would you anticipate? From your internet research, what cost problems occur with air ambulance programs and what sources of reimbursement are available? What institutional advantages and disadvantages need to be considered before proceeding with the program?

Appendix C

Consulting Paper

Please read the Cleveland Clinic case. Assume it is 2008 and you been engaged as a consultant by CEO Tony Cosgrove to provide strategic advice to the Cleveland Clinic. Dr. Cosgrove has three questions regarding how to grow the system:

1. What aspects of the Cleveland Clinic could limit its growth?

2. Evaluate each of the current growth efforts to determine whether they should be actively pursued and why: 1) Florida and Similar US Expansion; 2) Ohio; 3) MyConsult/Telemedicine; 4) Affiliates; 5) Canada Executive Health; and 6) Other International Expansion.
3. What other general business advice can you provide to the Cleveland Clinic?

Appendix D

Key Case Questions

Module One: Cincinnati Children's

1. What are key differences in healthcare organizations vs. manufacturing organizations? How should these differences impact CCHMC's approach to improving quality?
2. What do you think about CCHMC's improvement team's policy of transparency? Are they being too open with their performance data?
3. Consider Exhibit 4, Figure D. Which problem would you recommend they address first?
4. Moving forward, what would you recommend Kotagal do to sustain the hospital's improvement efforts?

Module Two: Dartmouth-Hitchcock

1. What motivated Weinstein to found the Spine Center?
2. Describe the Spine Center model. How does it differ from prevailing approaches to the delivery of spine care?
3. How does the Spine Center create value for patients?
4. What issues and challenges does the Spine Center face? What would you recommend that Weinstein and Abdu do about them? What could the leadership of Dartmouth-Hitchcock do to help?
5. Can this model be used beyond spine care? Which clinical areas would benefit most from such a model? Should this model be extended to other areas of Dartmouth-Hitchcock?

Module Three: Schon Klinik

1. Why did Deerberg accept Porter's invitation for a TDABC pilot project? What benefits might he have expected beyond the information already being supplied by Schon's existing cost system?

2. Comment on the TDABC process. What did they do well? What could have been improved? In particular consider the choice of :
 - a. Medical condition
 - b. Location
 - c. Clinical leader
 - d. Project staff
3. What did Schon learn from the initial TDABC project at Neustadt?
4. How did Schon leverage the results from the pilot study at other locations?

Module Four: PatientsLikeMe

1. What value does PatientsLikeMe bring to patients and to clinicians? How can patient-generated health data be used to make decisions regarding treatment?
2. In what ways does patient-generated health data complement traditional clinical trial processes? What challenges might arise in this context?
3. What would you advise PatientsLikeMe to consider as it aims to scale and grow its business?
4. How does PatientsLikeMe manage the issue of patient privacy? How does this differ from the traditional approach in the healthcare sector?

Module Five: The Dana-Farber Cancer Institute

1. Who, or what, Caused the death of Betsy Lehman?
2. What was the Dana-Farber's system for ensuring patient safety?
3. How should the Dana-Farber respond to the *Globe* story of March 23, 1995?
4. What are the key issues that must be addressed in the first few days after the error was discovered?
5. How should the Dana-Farber reduce the risk of future errors?

Module Six: Oak Street Health: A New Model of Primary Care

1. Describe Oak Street Health's strategy.