

Fundamentals of Healthcare Business

MANA 7312

Version 1.0

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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 and access and decreasing cost.
- 3. Consider the role of organizational behavior, operations, innovation, technology, data analysis and strategy on healthcare improvement.

Course Description

The healthcare system in the United States is massive, complex, and dysfunctional. This course will serve: 1) students interested in an introduction to leading healthcare organizations; 2) students who want a better understanding of the US healthcare system; and 3) 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 by improving quality and access while decreasing cost. Finally, we will explore how changes in organizational behavior, operations, innovation, technology, data analysis and strategy can improve healthcare.

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. It is

available for purchase on the Harvard Business Publishing website at:

https://hbsp.harvard.edu/import/748137

Course Structure

Our class will meet for fourteen weeks on Monday 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 seven 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. <u>Please note that I will frequently call on you for your input or opinions</u>, so be prepared. Please review Appendix A for details.

Excused Absence Policy

Regular class attendance, participation, and engagement in coursework are important contributors to student success. Absences may be excused as provided in the University of Houston Graduate Excused Absence Policy for reasons including: medical illness of student or close relative, death of a close family member, legal or government proceeding that a student is obligated to attend, recognized professional and educational activities where the student is presenting, and University-sponsored activity or athletic competition. Additional policies address absences related to military service, religious holy days, pregnancy and related conditions, and disability.

Recording of Class

Students may not record all or part of class, livestream all or part of class, or make/distribute screen captures, without advanced written consent of the instructor. If you have or think you may have a disability such that you need to record class-related activities, please contact the Center for Students with Disabilities. If you have an accommodation to record class-related activities, those recordings may not be shared with any other student, whether in this course or not, or with any other person or on any other platform. Classes may be recorded by the instructor. Students may use instructor's recordings for their own studying and notetaking. Instructor's recordings are not authorized to be shared with anyone without the prior written approval of the instructor. Failure to comply with requirements regarding recordings will result in a disciplinary referral to the Dean of Students Office and may result in disciplinary action.

Syllabus Changes

Please note that the instructor may need to make modifications to the course syllabus and may do so at any time. Notice of such changes will be announced as quickly as possible.

Resources for Online Learning

The University of Houston is committed to student success, and provides information to optimize the online learning experience through our Power-On website. Please visit this website for a comprehensive set of resources, tools, and tips including: obtaining access to the internet, AccessUH, and Blackboard; requesting a laptop through the Laptop Loaner Program; using your smartphone as a webcam; and downloading Microsoft Office 365 at no cost. For questions or assistance contact UHonline@uh.edu.

UH Email

Email communications related to this course will be sent to your Exchange email account which each University of Houston student receives. The Exchange mail server can be accessed via Outlook, which provides a single location for organizing and managing day-to-day information, from email and calendars to contacts and task lists. Exchange email accounts can be accessed by logging into Office 365 with your Cougarnet credentials or through Access UH. They can also be configured on IOS and Android mobile devices. Additional assistance can be found at the Get Help page.

Webcams

Access to a webcam is required for students participating remotely in this course. Webcams must be

turned on (video unmuted) during all live course meetings to enable our discussions.

Honor Code Statement

Students must abide by an honor code as part of their submission of any graded work including but not limited to projects, quizzes, and exams: "I understand and agree to abide by the provisions in the Houston Graduate Academic Honesty Policy. I understand that academic honesty is taken very seriously and, in the cases of violations, penalties may include suspension or expulsion from the University of Houston."

Synchronous Online Courses

This course is being offered in the synchronous online format. Synchronous online class meetings will take place according to the class schedule. In between synchronous class meetings, there may also be asynchronous activities to complete (e.g., discussion forums and assignments). An alternative assessment will be used in the place of the traditional final exam at the course conclusion. Instructions will be provided, including the date and time that the assessment materials will be released to the class and will be due, resources and collaborations that are allowed and disallowed in the process of completing the assessment, procedures to follow if connectivity or other resource obstacles are encountered during the assessment period, acceptable submission formats, and submission location.

Helpful Information

COVID-19 Updates: https://uh.edu/covid-19/

Coogs Care: https://www.uh.edu/dsaes/coogscare/

Laptop Checkout Requests: https://www.uh.edu/infotech/about/planning/off-

campus/index.php#do-you-need-a-laptop

Health FAQs: https://uh.edu/covid-19/faq/health-wellness-prevention-faqs/

Student Health Center: https://uh.edu/class/english/lcc/current-students/student-health-

center/index.php

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 strongly 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.

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

Textbooks: Handbook - Introduction, Chapter 1, Quiz One on Jan 25

Readings: The Market for Healthcare

The Challenge Facing the US Healthcare System US Healthcare Reform: International Perspectives

Homework: Volume to Value (Homework due prior to class on Feb 1)

Key Case: Cincinnati Children's Hospital Medical Center

(Case Questions due prior to class on Feb 1)

Modules: 1.1 Introduction to Course

1.2 COVID-19 Pandemic1.3 Is Healthcare a Business?1.4 Size and Complexity1.5 Healthcare Challenges1.6 Value in Healthcare

1.7 Healthcare in Other Countries

1.8 Homework Assignment: Volume to Value

1.9 Textbook Quiz One1.10 Textbook Comments1.11 Reading Comments

1.12 Key Case: Cincinnati Children's

Schedule: Jan 25 Lecture on Value, Quiz One

Feb 1 Homework One due before class start Case Questions due before class start Cincinnati Children's Case Discussion

MODULE TWO – QUALITY

Textbook: Handbook - Chapter 3 (Quality Section), Quiz Two on Feb 8

Readings: Health Care's Service Fanatics

Mistake-Proofing Healthcare: Why Stopping Processes May Be a Good Start

Clinical Change at Intermountain Healthcare

Homework: Leapfrog Analysis (Homework due prior to class on Feb 15)

Key Case: Dartmouth-Hitchcock (Case Questions due prior to class on Feb 15)

Modules: 2.1 Previous Class Review

2.2 What is Quality?2.3 Zero Harm

2.4 Evidence Based2.5 Patient Centered

2.6 Homework: Leapfrog Analysis

2.7 Textbook Quiz Two2.8 Textbook Comments2.9 Reading Comments

2.10 Key Case: Dartmouth-Hitchcock

Schedule: Feb 8 Lecture on Quality, Quiz Two

Feb 15 Homework Two due before class start Case Questions due before class start Dartmouth-Hitchcock Case Discussion

MODULE THREE - COST

Textbook: Handbook Chapter 2, Quiz Three on Feb 22

Readings: How Not to Cut Health Care Costs

How to Solve the Cost Crisis in Health Care Time-Driven Activity Based Costing

Homework: Long Term Cost Analysis (Homework due prior to class on Mar 1)

Key Case: Schon Klinik (Case Questions due prior to class on Mar 1)

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 Three3.8 Textbook Comments3.9 Reading Comments3.10 Key Case: Schon Klinik

Schedule: Feb 22 Lecture on Cost, Quiz Three

Mar 1 Homework Three due before class start Case Questions due before class start Schon Klinik Case Discussion

MODULE FOUR - INNOVATION

Textbook: Handbook - Chapter 4, Quiz Four on Mar 8

Readings: Why Innovation in Health Care is so Hard

3 Entrepreneurs Who Made It Their Mission to Lower Health Care Costs

Homework: Doctors Are Us (Homework due prior to class on Mar 22)

Key Case: Fitbit (Case Questions due prior to class on Mar 22)

Modules: 4.1 Previous Class Review

4.2 Is Innovation a Game Changer?

4.3 Innovation

4.4 Pharmaceutical Industry4.5 Medical Device Industry4.6 Homework: Doctors Are Us

4.7 Textbook Quiz Four4.8 Textbook Comments4.9 Reading Comments4.10 Key Case: Fitbit

Schedule: Mar 8 Lecture on Innovation, Quiz Four

Mar 22 Homework Four due before class start Case Questions due before class start

Fitbit Case Discussion

MODULE FIVE - DATA ANALYSIS

Textbook: Handbook - Chap 3 (Health Inf Tech and Culture Sections), Quiz Five on Mar 29

Readings: When Healthcare Gets a Healthy Dose of Data

Data Analytics at Alexandra Health System Applications of Business Analytics in Healthcare

Jeff Case

Homework: Using Predictive Analytics to Improve Quality and Reduce Costs

(Homework due prior to class on Apr 5)

Key Case: PatientsLikeMe (Case Questions due prior to class on Apr 5)

Modules: 5.1 Previous Class Review

5.2 Data Analysis Game Changers?

5.3 Data Analysis

5.4 Homework: Data Analytics Program

5.5 Textbook Quiz Five

5.6 Textbook Comments

5.7 Reading Comments

5.8 Key Case: PatientsLikeMe

Schedule: Mar 29 Lecture on Data Analysis, Quiz Five

Apr 5 Homework Four due before class start

Case Questions due before class start PatientsLikeMe Case Discussion

MODULE SIX - LAW AND POLICY

Textbook: Handbook - Chapter 3 (Med Mal Section) and Chapter 5, Quiz Six on Apr 12

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

Four Statutes

Homework: Wrong Injection (Homework due prior to class on Apr 19)

Key Case: The Dana-Farber Cancer Institute (Case Questions due prior to class on Apr 19)

Modules: 6.1 Previous Class Review

6.2 Health Law Regulation

6.3 Four Statutes

6.4 Medical Malpractice6.5 Hawkins v. McGee

6.6 Healthcare Policy and Reform6.7 The Limits of Healthcare

6.8 Homework: Wrong Injection

6.9 Textbook Quiz Six

6.10 Textbook Comments

6.11 Reading Comments

6.12 Key Case: Dana Farber

Schedule: Apr 12 Lecture on Law & Policy, Quiz Six

Apr 19 Homework Five due before class start

Case Questions due before class Dana Farber case discussion

MODULE SEVEN - STRATEGY

Textbook: Handbook - Chapter 6, Quiz Seven on Apr 26

Readings: Strategic Decision Making in Healthcare Organizations

The Strategy that Will Fix Health Care

Homework: Air Ambulance (Homework due prior to class on May 3)

Key Case: Oak Street Health: A New Model of Primary Care (Questions due prior to class on May 3)

Modules: 7.1 Previous Class Review

7.2 Business Strategy Basics7.3 Healthcare Strategy

7.4 COVID-19 Pandemic Revisited7.5 Homework: Air Ambulance7.6 Textbook Quiz Seven7.6 Textbook Comments7.7 Reading Comments

7.8 Key Case: Oak Street Health

7.9 Course Summary

Schedule: Apr 26 Lecture on Strategy, Quiz Seven

May 3 Homework Six due before class start Case Questions due before class start

Oak Street Health Case Discussion and Course Wrap-Up

May 10 Consulting Paper due at midnight

Appendix A

Live Session Expectations

PLEASE BE PREPARED TO BE CALLED ON DURING CLASS – IT IS EXPECTED THAT YOU HAVE READ AND ARE FAMILIAR WITH ASSIGNED READINGS AND CASES

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-Ave 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/rankings-and-ratings/where-are-the-16-leapfrog-f-hospitals.html and choose a facility that received a grade of "F" by Leapfrog.

- 2. Review the chosen hospital's report care 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 – Long Term Cost 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 - Doctors Are Us

Review the Doctors Are Us case study. Assume you have been hired as a consultant by a group of investors seeking to invest in healthcare technology. Evaluate the Doctors Are Us business for possible investment.

- 1. What do you see as the strengths of the business?
- 2. What do you see as the weaknesses of the business?
- 3. Do you recommend investing in the business?

HOMEWORK FIVE – 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. Describe a healthcare system program that would use clinic visits to improve the quality and cost of care for a given population of 300 patients with similar medical problems and life circumstances to Jeff. Assume you have a budget for hardware/software/staffing cost \$700,000 per year for a trial program. Can you justify the implementation of such a project on a qualitative basis? Can you justify the implementation on a quantitative cost benefit?

HOMEWORK SIX – 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 SEVEN- 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: Transformation and Growth 2015 case. Assume 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) Ohio growth; 2) Cleveland Clinic Innovations; 3)MyConsult; 4)Virtual Kiosks; 5) Urgent and Express Care walk-in clinics: 6) MyCare Online; 7) Florida hospitals; 8) Las Vegas expansion; 9) Cardiac Surgery Affiliate Program; 10) National Orthopedic and Spine Alliance; 11) 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: Fitbit

- 1. What kind of innovation is Fitbit?
- 2. What advice would you give Fitbit regarding a marketing focus on one or more of the following:
 - a. Amateur athletes
 - b. Professional athletes
 - c. Wellness targeting of consumers
 - d. Wellness targeting of employers
 - e. Wellness targeting of insurers
 - f. Wellness targeting of wellness companies
 - g. Patients with chronic diseases
 - h Physicians with patients who have chronic diseases
 - i. Institutions with patients who have chronic diseases
 - j. Some other type of consumer
- 3. If Fitbit is going to focus on chronic disease management, which disease or diseases would you recommend they begin marketing to?

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

1. Describe each of the key elements of Oak Street Health's strategy.