e-Health: Business Models and Impact
HCMG 866--Spring 2010
Prof. Spyros Stavrakas
Market Strategy Group Healthcare, Inc.
2300 Computer Avenue, Bldg G
Willow Grove, PA 19090
215-869-7060
spyros@wharton.upenn.edu

HCMG 866 eHealth: Business Models and Impact

HIT (health information technology) is a fundamental component to the way health care is delivered and managed, including clinical diagnosis and treatment, claims payment, pharmaceutical development and delivery, and consumer behavior. Recognizing this, Federal and State governments have been emphasizing and increasingly subsidizing the use of HIT. HIT is one of the faster growing business segments of the health care market.

This course will introduce students to the main components of HIT, with emphasis on the U.S. market. Although it will not prepare students for primary technology management positions, it will help them understand the role of connectivity and information in the success of the delivery system and other important healthcare processes such as drug development. It will provide a foundation that will prepare them as managers and consultants to rely upon or manage information technology to accomplish their objectives.

The course will give special attention to five areas:
- Core health care provider processes, especially how HIT supports the drive for quality and cost improvements,
- The adoption challenges of new clinical information technologies for hospitals, physician offices and consumers,
- The value of patient-centric and other databases for pharmaceutical and medical device marketing and product development,
- Emerging HIT enterprises, their strategies and economics with special emphasis this year on telemedicine enterprises,
- A global perspective on how US HIT efforts compare to European initiatives.

The course relies heavily on industry leaders to share their ideas and experiences with students.

Course objectives:
1. Introduce key health information technologies and their current and potential future roles in the health care industry;
2. Link investment in information technology to the market for health care services;
3. Facilitate critical analysis to evaluate the strengths and weaknesses of information technology in health care delivery.

Format:

Traditionally this course meets once per week for three hours in two sessions, the first devoted to discussion of the background reading and the second allocated to a presentation by industry leaders.

Grading:

Students will be evaluated on the write-ups of the one case studies (20%), two critical analysis of the presentation of an industry leader (30%) and a final exam (50%).

Readings:

- Articles and selected book chapters posted on the course web site or assembled in a bulk pack.
- Teri Thomas-Brogan, *Health Information Technology Basics*, Jones and Bartlett Publishers, 2009.
- Phillip Longman, *Best Care Anywhere, Why VA Health Care Is Better Than Yours*, Polipoint Press, 2007.
- Readings are separated into two categories.
    - Principal reading assignments and background reading.
    - The principal reading assignments are listed below; they are subject to change before the start of the semester.
    - An extensive background reading list will also be available; they provide further material for in depth research and use for assignments and case studies.

Prerequisites:

Basic familiarity with the U.S. health care system as covered in HCMG 841.

Assignments/Case Studies:

1. *Value of Information for Marketing*: How do healthcare product manufacturers use information produced by healthcare providers to target their marketing planning and selling strategies? What does integrating different information sources explain physician drug prescribing patterns? How can Pharmaceutical firms use this information to target individual physician practices? How does this information allow us to understand the general dynamics of pharmaceutical marketing? Exercise: Use ImpactRx physician survey and also longitudinal patient databases data for analysis of the US cholesterol therapy market place.

2. *Analysis of two guest lecturers*. Prepare a separate critical analysis of two guest lecturers. Evaluate the presenter's main points and conclusions. Answer such questions as: what ideas did the lecturer invoke and how they could impact health services or are there weaknesses in his opinions about the value or adoption rate of a new technology or compare and contrast the lecturer's approach to one available in one of the course readings.

HCMG 866 eHealth: Business Models and Impact

January 19   **Fundamentals of the health care industry and the economic role of information technology – eHealth evolution and key HIT terms**

Reading assignment:
- Jeff C. Goldsmith, "The Healthcare Information Technology Sector," Chapter 7 in *The Business of Healthcare Innovation*, L. Robert Burns, ed., Cambridge University Press, 2005.
- Wager *et al.*, "History and Evolution of Health Care Information Systems," Chapter 4 in *Managing Health Care Information Systems*, John Wiley, 2005

January 26   **Implementation Challenges of Provider Based Clinical Systems**

Guest Lecture: Peter Gabriel, Medical Director, Clinical Information Systems, University of Pennsylvania.

Reading assignment:
- Catherine M. DesRoches, Dr.P.H., Eric G. Campbell, Ph.D., et. al "Electronic Health Records in Ambulatory Care — A National Survey of Physicians", New England Journal of Medicine 2008;359:50-60.

February 2   **Supply Chain: IT as an enabler of the Supply Chain management**

Guest Lecture: Dave Zimba, Vice President, West Penn Allegheny Health System

Reading Assignment:
- Priya Kamani, "Accurate Data is the Foundation for Hospital Supply Chain Savings," *ASCET*, June, 2004.

February 9   **Operations and Decision Support: Information as an enabler for operational support and improvement.**

Ron Paulus, MD, MBA, Chief Technology and Innovation Officer, Geisinger Health System

Reading assignment
- Ronald A Paulus; Karen Davis; Glenn D Steele, "Continuous Innovation In Health Care: Implications Of The Geisinger Experience," Health Affairs, Sep/Oct 2008;

February 16 **Integrated Clinical Systems: Linking the hospital to physician practices and other cross sites-of-care**

Guest Lecture: C. Martin Harris, MD, MBA, Chief Information Officer, Cleveland Clinic Foundation

Reading assignment
- "Evidence on the Costs and Benefits of Health Information Technology", Congressional Budget Office, May 2008.

February 23 Medical Automation Innovations

Guest Lecture: Robin Felder, Ph.D., professor of pathology; former Director, Medical Automation Research Center at the University of Virginia

Reading Assignment:
- Carsten Orwat, Andreas Graefe and Timm Faulwasser, "Towards pervasive computing in health care – A literature review", BMC Medical Informatics and Decision Making 2008, 8:26

March 2   Payment Processes.

Guest Lecture: Jamo Rubin, MD, MBA, CEO of Tenzing Health; Founder and President, Medical Present Value

Reading assignment
- "Maximizing the Value of Physician Medical Group Payor Contracts", Healthcare Informatics, Summer 2006.

March 9   SPRING BREAK

March 16   Investment Banking Perspectives on HIT and Managed Care

Guest Lecturers: Raymond G. Falci, Managing Director
Cain Brothers; Archelle Georgiou, MD, Georgiou Consulting, LLC and Senior Fellow of the Center for Health Transformation.

Reading assignment
- Brenda R. Motheral, "2008: A Tipping Point for Disease Management?", JMCP, September 2008.

March 23   The role of telemedicine in 21st century healthcare

Guest Lecture: Cheryl Pegus, Chief Medical Officer, SymCare Personalized Health Solutions, JNJ

Reading assignment
- Carlton Doty, "Delivering Care Anytime, Anywhere: Telehealth Alters the Medical Ecosystem", California HealthCare Foundation, Nov. 2008.

March 30   **The Internet and the Changing Use of Information by Consumers and Clinicians**

.   **Guest Lecture:** David C. Kibbe**,** MD MBA Senior Advisor, American Academy of Family Physicians, Chair, ASTM International E31Technical Committee on Healthcare Informatics, Principal, The Kibbe Group LLC

Reading assignment:
- James S. Kahn, Veenu Aulakh, and Adam Bosworth, "What It Takes: Characteristics Of The Ideal Personal Health Record", Health Affairs, March 2009, 28, 2, 369-376.

April 6   **Patient Information Databases and the Pharmaceutical Development Process.**

Guest Lecturers: Bill Zeruld. Vice President, Premier Research Services and Bruce Wong, MD, Bruce Wong and Associates, Inc.

Reading assignment:
- Monroe, Potter et. al. "Kaiser Permanente's Evaluation of Management of Biotech Drugs:, Health Affairs, Sept/October, 2006, pp. 1340-1346.

April 13   **The Use of Information in Pharmaceutical Marketing**

Guest Lecture: Drew Bustos and TBD, Cegedim Dendrite

Reading assignment:
- F. Krieger, "Data Sources: the Good, the Bad, and the Ugly," *Journal of Longitudinal Data*, Nov/Dec, 2004, pp. 70-78.

April 20   **Federal and State Government Initiatives**

Guest Lecture: Gene Kroch, Vice President, Chief Scientist, Premier

Reading Assignment:
- Hunt et al., "Fundamentals of Medicare Patient Safety Surveillance: Intent, Relevance and Transparency", *AHRQ* Publication, February 2005.

April 27   **HIT and Europe; Course Wrap-up.**

Guest Lecture: Pieter Van Hoeven, Principal, TFG Partners, LLC

Reading assignment:
- "Electronic Health Records: A Global Perspective", HIMSS, August, 2008.