

e-Health: Business Models and Impact
HCMG 866--Spring 2009

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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 (health insurers), pharmaceutical development and delivery, and consumer behavior. Recognizing this, Federal and State governments have been emphasizing the increased use of HIT. HIT companies are also one of the faster growing segment of the health care market.

This course will introduce students to the main components of HIT, with emphasis on the components that distinguish the health care delivery system from other business enterprises. Although it will not prepare students for primary technology management positions, it will help them understand the role of information in the success of the delivery system and other important healthcare processes. 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 processes, HIT and the drive for quality and cost improvements,
- The adoption of new clinical information technologies for physician offices and consumers,
- The value of patient-centric and other databases for pharmaceutical marketing and product development, ,
- Emerging HIT enterprises, their strategies and economics.
- 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 two case studies (20% for each), one critical analysis of the presentation of an industry leader (20%) and a final exam (40%).

Readings:

- “Evidence on the Costs and Benefits of Health Information Technology”, Congressional Budget Office, May 2008.
- Phillip Longman, *Best Care Anywhere, Why VA Health Care Is Better Than Yours*, Polipoint Press, 2007.
- Articles and selected book chapters posted on the course web site or assembled in a bulk pack.

Prerequisites:

Basic familiarity with the U.S. health care system, as covered in HCMG 841; also, some foundation in mathematical statistics.

Case Study Assignments:

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/LPD data for analysis of the US cholesterol therapy (statin) market place.
2. *Comparative HIT—the United States and the Netherlands*. How are different national governments and health systems influencing the advancement of HIT. Answer questions such as: What are the advantages and disadvantages of the US system when it comes to HIT development compared to a specific foreign country such as the Netherlands (or another country the student is familiar with). Where do you see opportunities to leverage specific hardware, software and/or applications solutions from the US in another country such as the Netherlands? What are the key facilitating factors and what are the main barriers?
3. *Analysis of a guest lecturer*. Prepare a separate critical analysis of one guest lecturer. 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.

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January 20 Fundamentals of the health care industry and the economic role of information technology – eHealth evolution and HIT adoption

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 27 Role of Government in HIT and the future of health care.

Guest Lecture: Gene Kroch, PhD, Vice President, Research, Premier

Reading assignment

- Congressional Budget Office, "Evidence on the Costs and Benefits of Health Information Technology, May, 2008.
- Phillip Longman, *Best Care Anywhere, Why VA Health Care Is Better Than Yours*, Polipoint Press, 2007.
- Hunt et al., "Fundamentals of Medicare Patient Safety Surveillance: Intent, Relevance and Transparency", *AHRQ* Publication, February 2005.
- Nancy Ferris, "First round of health IT standards harmonization is complete", *Government HealthIT*, January 23, 2008, (<http://www.govhealthit.com/online/news/350166-1.html>)
- MacDonald, "HIPAA – The Health Insurance Portability and Accountability Act," *First Consulting Group*, June 2002.
- J.D. Kleinke, "Dot-Gov: Market-Failure and The Creation of a National Health Information Technology System," *HA*, pp.1246-1262.

February 3 Operations and Decision Support: Hospital information requirements for operational support and improvement - the provider approach to quality and patient safety; pay-for-performance.

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; 27, 5;

- Institute of Medicine, “Part II” & “Chapter 6: Adverse Event Analysis,” in *Patient Safety: Achieving a New Standard for Care*, National Academy Press, 2004: 169-172 & 200-225.
- Wachter, “Patient Safety Five Years after *To Err is Human*,” *HA*, November, 2004 (W4):534-545.

Supplemental Reading:

- Bates *et al.*, “Ten Commandments for Effective Clinical Decision Support: Making the Practice of Evidence-Based Medicine a Reality,” *Journal of the American Medical Informatics Association*, November/December 2003: 523-530.
- Jerome Osherooff, et. al. “Clinical Decision Support Implementers Workbook”, HIMSS, 2004.
- Bates and Gawande, “Improving Safety With Information Technology,” *The New England Journal of Medicine*, June 19, 2003: 2526-2534.
- Koppel et al., “Role of Computerized Physician Order Entry Systems in Facilitating Medications Errors”, *JAMA*, March 9, 2005, Vol. 293, No. 10., 1197.

February 10 Managed Care: Managed Care, Pharmaceutical Managed Care Outcomes, Disease Management and Consumer Directed Health Care.

Guest Lecture: Archelle Georgiou, MD, Georgiou Consulting, LLC and Senior Fellow of the Center for Health Transformation.

Reading assignment

- Nagy, “Consumerism’s rise remodels methods of Care Management”, *Managed Healthcare*, September 2006.
- Yale and Peerschke, “Pharma: Coping with Consumerism”, *InVivo*, July/August, 2006.
- Congressional Budget Office, “An Analysis of the Literature of Disease Management Programs” Washington, D.C., October, 2004.
- John Geyman, “Disease Management: Panacea, Another False Hope or Something in Between,” *Annals of Family Medicine*, 5:257-260(2007).

February 17 The Investment Banking Perspective and Provider Based Systems

Guest Lectures: Ben Rooks, Wm. Blair and Company; Peter Gabriel, Medical Director, Clinical Information Systems, University of Pennsylvania

Reading assignment

- Ben Rooks, “Gone Shopping”, *Healthcare Informatics*, June, 2008.
- Wang *et al.*, “A Cost-Benefit Analysis of Electronic Medical Records in Primary Care,” *American Journal of Medicine*, April 1, 2003: 397-403.

February 24 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

- Jean Sidorov, “It Ain’t Necessarily so: the Electronic Health Record and the Unlikely Prospect of reducing Health Care Costs”, *HA*, 25, #4, pp.1079-1085.
- Justin Graham, MD, MS, “By focusing too narrowly on EHR adoption, are we missing the point?”, *Healthcare Informatics*, 4/18/06
- Miller and Miller, “The Santa Barbara County Care Data Exchange: Lessons Learned, California Healthcare Foundation, August 2007.

March 3 Payment Processes: A Start-up firm in Practice Management Services.

Guest Lecture: Jamo Rubin, MD, MBA, Founder and President, Medical Present Value

Reading assignment

- Jim Beinlich, Scott Manaker, “Consumer-directed Health Care,” Advance for Health Information Executives, August 2008.
- ECG Management Consultants, “ Optimizing Professional Fee Reimbursement Through Payor Contract Performance Management”, *HFMA Physician Practice Management Committee*, January 31, 2003.
- “The Need for Fairness and Transparency in Health Care Contracting and Payment; Testimony before the National Association of Insurance Commissioners Health Insurance and Managed Care Committee”, *American Medical Association*, June 13, 2005.
- “Maximizing the Value of Physician Medical Group Payor Contracts”, *A White Paper for Healthcare Informatics*, Summer, 2006.
- Private Payer News, March 6, 2006.

March 10 SPRING BREAK

March 17 The EMR and Patient management in physician offices.

Guest Lecture: Glen Tullman, CEO, Allscripts.

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”, *N Engl J Med* 2008;359:50-60.

- Miller *et al.*, “The Value of Electronic Health Records in Solo or Small Group Practices,” *HA*, pp.1127-1137.
- C. W. Burt and J. E. Sisk, “Which Physicians and Practices are using Electronic Medical Records?” *HA*, pp.1334-1343.
- R. Hillestad *et al.*, “Can Electronic Medical Record Systems Transform Health Care?,” *HA*, pp.1103-1117 .
- D. U. Himmelstein and S. Woolhandler, “Hope and Hype: Predicting the Impact of Electronic Medical Records,” *HA*, pp.1121-1123

March 24 Patient Information Databases and the Pharmaceutical Development Process.

Guest Lecture: Bruce Wong, MD, Bruce Wong and Associates, Inc.

Reading assignment:

- Monroe, Potter et. al. “Kaiser Permanente’s Evaluation of Management of Biotech Drugs;,” *HA*, Sept/October, 2006, pp. 1340-1346.
- W. Diller, “The Outlook for Pharmacogenomics in Primary Care,” *In Vivo: The Business and Medicine Report*, November 2004.

March 31 The Use of Information in Pharmaceutical Marketing.

Guest Lecture: Stephen Fox, America’s Practice Leader, Sales and Account Management, IMS America

Reading assignment

- Longman, “Redefining Marketing and Development Innovation: GSK’s Success with Advair,” *In Vivo: The Business and Medicine Report*, Mar 2003.
- F. Krieger, “Data Sources: the Good, the Bad, and the Ugly,” *Journal of Longitudinal Data*, Nov/Dec, 2004, pp. 70-78.
- Stavarakas and DeWitt, Leveraging Patient Centric Information for Market Success, *In Vivo*, November 2005
- Aggarwal, Forsyth, Garg, St-Maurice, “Predicting Commercial Success, Not Revisiting the Past,” *In Vivo*, September, 2004.

April 7 Supply Chain: IT as an enabler of the Supply Chain management: Hospital and Manufacturers and other business-to-business commerce.

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

Reading assignment

- Frank Jossi, “Hospital Stock Exchange” *Healthcare Informatics*, November 2003. http://www.healthcare-informatics.com/issues/2003/11_03/jossi.htm
- Judy Rowe, “Driving and Measuring Supply Savings,” *Health Care Technology*, Vol. 2, June, 2004.

- Priya Kamani, “Accurate Data is the Foundation for Hospital Supply Chain Savings,” *ASCET*, June, 2004.

April 14 Clinical Development: IT as an enabler for Product Development: Clinical Trials and Pharmaceutical R&D

Guest Lecture: Gregg Fromell, Executive Director, Office of Human Research, University of Pennsylvania Medical School;

Reading assignment

- Ramos, “The promise of Next-Gen eClinical Trial Software, *The Forrester Report*, March 2006.
- Brown, “Clinical Trials’ EDC Endgame,” *The Forrester Report*, Sept. 2004

April 21 Role of HIT in the future of health care.

Guest Lecture: Changing Use of Information by Consumers: Informing consumer/patients, and telemedicine.

Guest Lectures: David C. Kibbe, MD MBA, Director, Center for Health information Technology, American Academy of Family Physicians and Stephen Zollo, Vice-President of Marketing and Sales - Consumer/Personal Products Group, JNJ.

Reading assignment

- Christopher Gearson, *Perspectives on Future of Personal Health Records*, California Healthcare Foundation, July 2007.
- Steve Lohr, “Google and Microsoft Look to Change Health Care”, New York Times, August 14, 2007.
- MinuteClinic announces Continuity of Care Record, *Yahoo Online*, October 2006.
- Endsley et al., “An Introduction to Personal Health Records”, <http://www.aafp.org/fpm/20060500/57anin.html>
- First Consulting Group, “Online Patient-Provider Communication Tools: An Overview,” *California HealthCare Foundation*, November 2003.
- L. Baker, “Use of the Internet and E-mail for Health Care Information,” *JAMA* **289**(18): 2400-2406 (May 14, 2003).
- Viterion, “Reduce Health care Expenditures and increase Quality of Patient Care with Comprehensive Telehealth Solutions,” September 2004.

April 28 HIT Globally: European vs. US Experiences.

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

Reading assignment:

- Alain Enthoven, "A Living Model Of Managed Competition: A Conversation With Dutch Health Minister Ab Klink." [*Health Affairs* 27, no. 3 (2008): w196–w203 (published online 8 April 2008;10.1377/hlthaff.27.3.w196)
- Gautam Naik, "In Holland, Some See Model For U.S. Health-Care System", *The Wall Street Journal*, September 6, 2007
- Gardiner Harris, " Looking at Dutch and Swiss health care systems", *The New York Times*, October 30, 2007