This is a sample of the instructor resources for Glandon, Smaltz, and Slovensky, *Information Systems for Healthcare Management,* eighth edition. The complete materials include the following:

- answers to end-of-chapter discussion questions
- PowerPoint slides for each chapter
- test bank
- transition guide to the new edition

This sample includes the PowerPoint slides and the answers to the end-of-chapter discussion questions for Chapter 1.

If you adopt this text, you will be given access to the complete materials. To obtain access, e-mail your request to hapbooks@ache.org and include the following information in your message:

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Answers to Discussion Questions for

Chapter 1
Connecting the Strategic Dots: Does HIT Matter?

1. What are the five most important challenges faced by HIT today, and why?

   1. *Healthcare costs.* Costs are increasing rapidly and persistently. International comparisons and evidence that significant spending provides no real health benefit suggest that better outcomes can be attained with less spending. HIT can enable providers and analysts to make more efficient and more effective decisions once health and financial data are collected and aggregated throughout the system.

   2. *Medical errors and poor healthcare qualit*y. There is widespread evidence (IOM report *To Err Is Human*) that we induce mortality and morbidity through failures of our system to deliver care appropriately. Among the many causes, lack of communication and coordination across components of the delivery systems contribute to these errors and to poor quality. HIT can improve this outcome by enabling better collection and sharing of health-related information.

   3. *Access and health disparities.* Nearly 50 million people in this country lack health insurance, and many more have substandard insurance coverage. This lack of coverage leads to poor outcomes because people delay in seeking care early in the disease process, and it raises costs because care is delivered in the ER and other more expensive settings. As reforms are implemented, HIT will be stressed to accommodate this many newly insured people in the system as well as the differences in medical challenges these individuals will likely bring to the system.

   4. *Evidence-based medicine.* Clinical evidence for appropriate and best practices can improve health outcomes and reduce waste and inefficient use of resources. The HIT challenge is to gather and efficiently catalogue these findings and find a mechanism to disseminate this knowledge to providers and other decision makers.

   5. *Organizational change.* As the ownership and assembly of segments of the provider network change, HIT faces political and technical challenges in meeting the changing needs of leadership in these new organizational structures. HIT needs to be aware of and integrated into the senior decision-making units of the delivery system.

2. What are the five most important future challenges that will face HIT, and why?

1. *Healthcare system change* has begun but will accelerate with the implementation of the Patient Protection and Affordable Care Act and other social forces. Government and private payers will continue to demand change, and the system will need to respond. The system's response will be to more carefully align payment with performance or outcomes, and payment will increasingly be tied to global outcomes, not just an outcome defined by one segment of the delivery process. HIT will need to collect and link clinical and financial data across elements of the delivery system. Further, HIT must find ways to track patients after they leave the system so that more distal outcomes can be monitored and reported.

2. *Consumer empowerment* will create pressure on HIT to provide relevant and accurate information through new channels not currently deemed important. As patients become more involved in the diagnosis, treatment, and recovery processes, they must have access to clinical information that has heretofore been unavailable to them. Similarly, they will increasingly desire to provide vital information through nontraditional mechanisms as they use phone and medical devices housed in their home and other locations external to traditional provider environments.

3. *Connectivity* will expand as information flows multiply through social media in ways we can only now imagine. Future generations will gather information and communicate using technology that HIT does not currently integrate into its thinking. Technology challenges, along with privacy and security issues, make connectivity a major challenge to current HIT thinking.

4. *Transparency* will fundamentally alter how HIT controls the flow of clinical and financial information across systems, among consumers, and through media systems. The pull to become sufficiently transparent while protecting individual patients' privacy and security will challenge future HIT professionals.

5. *Tourism* will be a challenge because patients with their added empowerment, connectivity, and system transparency will seek care outside of their traditional environs. This tourism may be international travel for select procedures or, more likely, regional travel within the United States. The movement of significant numbers

of patients seeking care will make identification, collection of clinical data, dissemination of those data, and effective follow-up documentation complicated and will expand the scale and scope of HIT.

3. **In what ways may improved HIT assist in continuity, communication, coordination, and accountability of patient care? [Hint: Consider Goldsmith's discussion.]**

HIT systems will enable providers to gather and share clinical and financial information across organizational boundaries and thus to make efficient and effective clinical decisions for the patient. These decisions will consider the patient's health and well-being not just from the perspective of a single provider but in a holistic manner.

4. **How can HIT assist organizations in responding to the drivers of information technology changes?**

HIT, properly structured, will give organizations internal and external information on care delivery so that the organizations can best meet increasingly empowered patients' needs. HIT must be aware of both current challenges and likely future challenges so that it is ready to provide the systems needed to meet the known and expected organizational and consumer demands.

5. **Define and describe evidence-based medicine. Are there positive or negative aspects of this concept for the healthcare field?**

For the definition, see the bottom of page 6. The system is an attempt to systematically assemble information known from research regarding best practices for providing care to patients. The alternative is to rely on provider judgment irrespective of what the evidence suggests as the best approach. The positive effects are that it may reduce variability in practice patterns and thus the likelihood of too much or too little care being provided.

6. **Why is the improvement of clinical information systems a high priority to most healthcare organizations?**

    The increasing emphasis on quality of care is the primary reason for the emphasis on clinical information systems. A secondary reason is that reimbursement changes also rely on valid and reliable clinical data.

7. **Order the following types of healthcare information systems from most important to least important to a healthcare organization, and discuss why you chose this order.**

    a. Clinical information

    b. Operational management

    c. Strategic decision support

    d. Electronic networking and e-health applications

    The order is probably "a, b, c, d" but reasons may vary and alternatives would be allowed if properly justified. *Clinical information* should be first because this is the fundamental "product" of the health system. *Operational management* is second because services around clinical care need to be delivered. *Strategic decision support* is vital but of less concern because of the need to meet operational needs first. *Networking and e-health* are currently secondary to the primary mission.

Chapter 1: Connecting the Strategic Dots: Does HIT Matter?

Overview

- HIT strategic alignment

- Operational effectiveness: making HIT work

- Strategic competitive advantage: building HIT for the future

Learning Objectives

- List and define five major challenges facing healthcare delivery systems today.

- Describe the complexity of these interrelated challenges for healthcare and HIT.

- Illustrate the history, development, and current state of healthcare information systems.

- Name and describe the four categories of healthcare information systems.

- Analyze the key priorities of healthcare information systems today that will affect their future.

The Future Is Now!

- The healthcare industry is information intensive, and the management of healthcare organizations is improved by strategic use of information for:
  - Quality patient care
  - Financial management
  - Strategic planning
  - Operations management

Current Challenges

- Healthcare costs
- Medical errors and poor quality
- Access and health disparities
- Evidence-based medicine
- Broad organizational changes

Healthcare Costs

- Trend of upward costs for 45 years
- Cost increases may make the US economy less competitive
- Government and private payers implement cost controls
- Variance in use and costs provides indirect evidence that we can control costs

Medical Errors and Poor-Quality Care

- Excess of preventable deaths demonstrated by Institute of Medicine in 1999
- Problem persists today despite greater awareness and discussion
- Solutions are elusive

Access and Health Disparities

- Information systems can assist in providing better access to care.

- Solving access problems will strain the system, however.

- Providing care to approximately 50 million will require better information exchange and coordination of care.

Number of Uninsured Fell by 1.3 Million in 2011
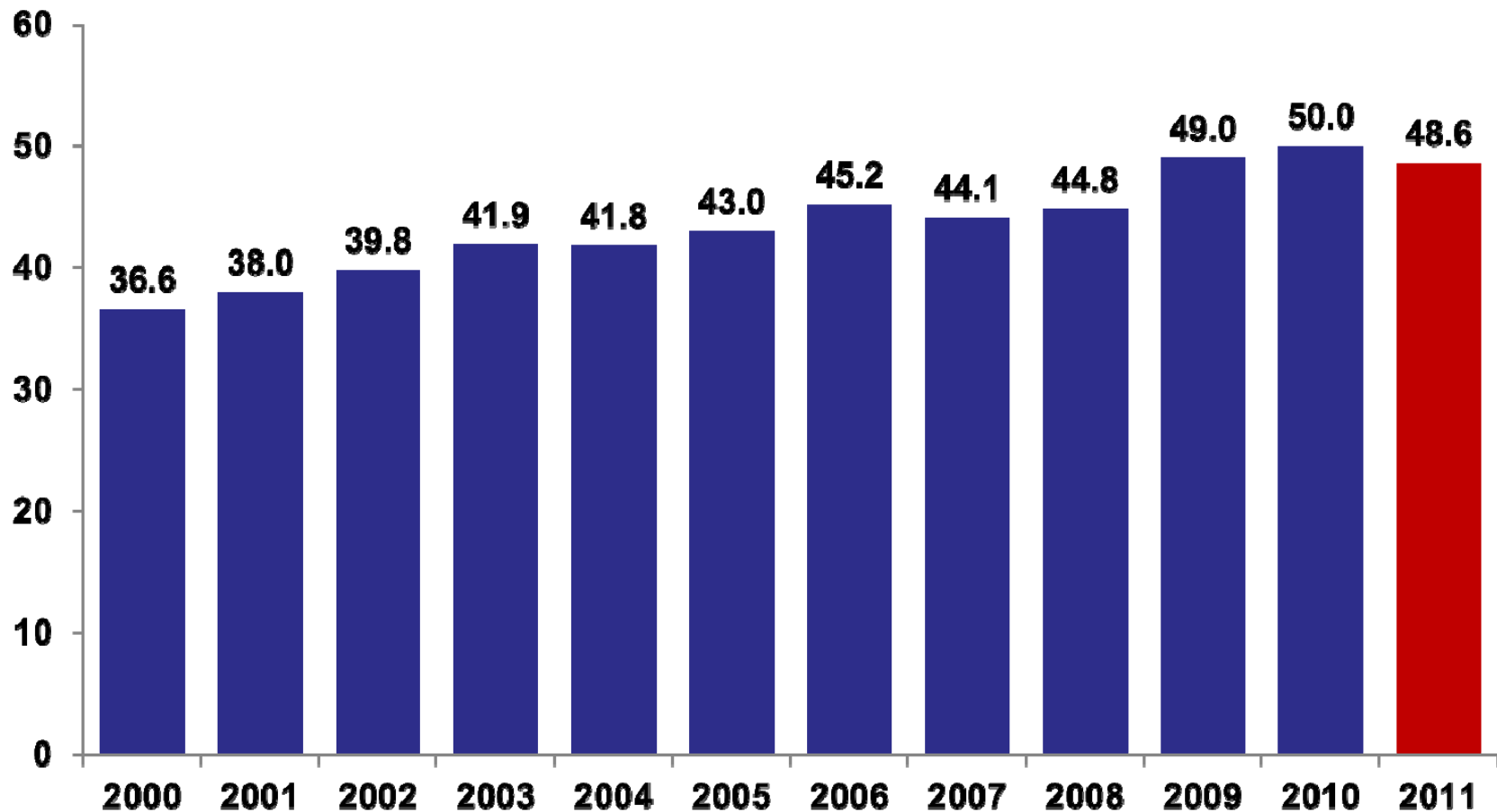
Evidence-Based Medicine

- Defined:

  "An information management and learning strategy that seeks to integrate clinical expertise with the best evidence available to make effective clinical decisions that will ultimately improve patient care"(Landry and Sibbald 2001)

Evidence-Based Medicine

- Evidence-based medicine is changing clinical processes

- Use of information is essential but has both benefits and costs

- Book helps managers collect and provide evidence for more informed management decisions

Broad Organizational Change

- Market-driven healthcare reform
- Increased market competition
- Managed care was the solution in the 1990s.
- The future is uncertain, and organizations need leadership to adapt to an uncertain future.

Future Challenges for Healthcare Information Systems

Five major challenges:

- Healthcare system change
- Consumer empowerment
- Connectivity
- Transparency
- Tourism

Healthcare System Changes

- Patient Protection and Affordable Care Act of 2010 had initial emphasis on access for uninsured

- Other elements have broader seeds for change, such as
  - Access to care for uninsured primary emphasis
  - Bundled payments
  - Payment for outcomes
  - Accountable care organizations
  - Patient-centered medical homes
  - Comparative effectiveness research

Consumer Empowerment

Consumers taking active role in care decisions:

- Internet provides access to information, giving patients more control

- Need for uniform, national information infrastructure, such as electronic health records, evidence-based clinical practices, and quality information

- Generating need for information management in healthcare

Connectivity

- Social media adding to the ability to send and receive information
  - E-mail
  - Text
  - Tweet
  - Other
- Federal Communications Commission exploring opportunities and challenges

Transparency

Driven by value-driven healthcare

- Interoperable HIT
- Public reporting of provider quality information
- Public reporting of cost information
- Incentives for value comparisons

Tourism

International and regional tourism

- Send historical patient health information
- Receive patient health information
- Compete with centers of excellence
- Financial incentives from employers (Walmart) contracting for care on the basis of price and quality

Categories of Information Systems

1. Clinical information
2. Management information
3. Strategic decision support
4. Electronic networking and e-health applications

Healthcare Information System Priorities Today

- Ch. 2: External Environment
- Ch. 3: Government Policy and Healthcare Reform
- Ch. 4: Leadership
- Ch. 5: HIT Governance and Decision Rights
- Ch. 6: HIT Architecture and Infrastructure
- Ch. 7: HIT Service Management

Healthcare Information System Priorities Today (cont'd)

- Ch 8: Systems Selection and Contract Management
- Ch. 9: Electronic Health Records
- Ch. 10: Management/Administrative and Financial Systems
- Ch. 11: HIT Project Portfolio Management
- Ch. 12: Knowledge-Enabled Organization
- Ch. 13: HIT Value Analysis

Web Resources

- Agency for Healthcare Research and Quality (www.ahrq.gov)
- Bureau of Labor Statistics (www.bls.gov)
- Care Continuum Alliance (www.carecontinuumalliance.org/index/asp)
- Centers for Medicare & Medicaid Services (www.cms.gov)
- Institute for Healthcare Improvement (www.ihi.org)
- National Association for Healthcare Quality (www.nahq.org)
- National Committee for Quality Assurance (www.ncqa.org)