

ACHE/GAHE

Board of Governors Exam Tutorial Sepi Browning, MHA, FACHE, FHIMSS, PMP August 2022

#### Congratulations!

By attending this review course and seeking to earn the FACHE certification, you have taken the first step in demonstrating that you have a solid grounding in the principles of healthcare administration.





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## Distinguish Yourself

- FACHE is a professional certification program for healthcare administrative professionals
- Distinguish yourself in an increasingly competitive marketplace
- Expand your career opportunities
- Validate your knowledge, competency and credibility
- Gain skills and tools to help you make a difference in your organization, and your community
- Demonstrate your commitment to continuing professional development

#### What The Review Course Is Not

- Not a "Prep Course" that will cover all areas tested
- Not a preview of the test
- Not a course that guarantees you will pass the test

### How to Prepare

- Create a study schedule, determine when you would like to take the exam and then plan your timeline which leads up to that date.
- Perform your own independent research, use authentic sources for your study materials.
- Create quality summary notes. Study these notes over and over.
- Write the content from memory onto paper and then compare these notes to the original notes.

## How to Prepare – Cont.

- Determine which topic areas you are most comfortable with and which ones you want to "brush up" on.
- Answer as many practice questions you can and identify your areas of weakness. Focus on these areas. Add answers to incorrect questions to your summary notes.
- Decide how much time and effort to expend on studying each topic area, based on the relative "weight" of the topic area (per content outline) and your experience and comfort level.

## Agenda

- Introductions
- I/S Trends in Healthcare
- I/S Strategic Planning
- I/S Materials
- Exam Study Guidelines
- Discussion
- Appendix
  - Study Guide
  - Sample Test Questions

## FACHE Healthcare Technology and Information Management Exam Core Knowledge Area

This area covers management information and clinical information systems such as finding computer-based support for management, assessing how current technologies and major innovations are changing the way healthcare executives manage, using information systems for short-and long-range planning, using clinical information systems and acquiring information systems.

#### FACHE Knowledge Area Outline

- Knowledge of the role and function of information technology in business operations
- Knowledge of technology trends and clinical applications in a healthcare organization
- Knowledge of technology policies and regulations (e.g., complying with HIPAA security requirements, complying with HITECH Act meaningful use requirements for electronic healthcare records)
- Knowledge of health informatics needed for operational decisions (e.g., data and equipment interoperability standards support)
- Knowledge of potential impacts and consequences of healthcare IT decision-making on staff and processes in finance, operations, healthcare, and quality of care
- Knowledge of information systems continuity (e.g., disaster planning, recovery, backup, security, sabotage, natural disasters)
- Knowledge of factors that influence selection, acquisition, and maintenance of IT systems (e.g., upgrades and conversions, technology lifecycles)
- Knowledge of healthcare analytics

#### What is Health?

- The World Health Organization (WHO) defines health as:
  - "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."

## What is Health Information Technology?

 Health Information Technology, or Health IT, is defined by the HHS Office of the National Coordinator for Health IT (ONC) as, "the application of information processing involving both computer hardware and software that deals with the storage, retrieval, sharing, and use of health care information, data and knowledge for communication and decision making" in healthcare.

#### What is Health Informatics?

 As defined by the U.S. National Library of Medicine, health informatics is, "the interdisciplinary study of the design, development, adoption, and application of ITbased innovations in healthcare services delivery, management, and planning."

# Health Information and Technology Characteristics

- Fast-paced
- Dynamic
- Ever-changing
- Focused on achieving the meaningful use of health IT and on regulatory initiatives to improve patient care

## Key Issues in Healthcare

- High, rapidly rising costs
- Highly variable clinical quality
- Patient safety issues
- Need for evidence-based decision making
- Complex administrative processes
- Increasing consumerism and heightened expectations
- Advances in research and technology

#### Our Industry Is Changing: Accessibility to Data

- Privacy & Security Concerns
- Need for data quality and consistency



- Larger data sets
- Diverse formats/types
- More timely/real-time data

- Need for analytics at the speed of business
- Demand for self-serve
- Need for integrated data

#### The Challenge: Establishing the "Mindset"

Approach all of these with an <u>Optimization</u> Strategy, NOT a "Check the Box" Strategy...

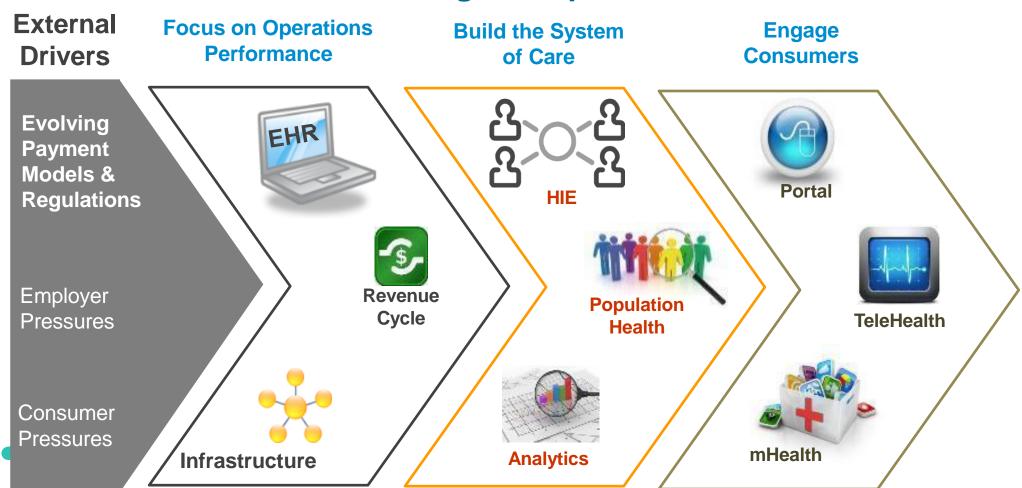
Improve Reimbursement

Improve Quality of Care

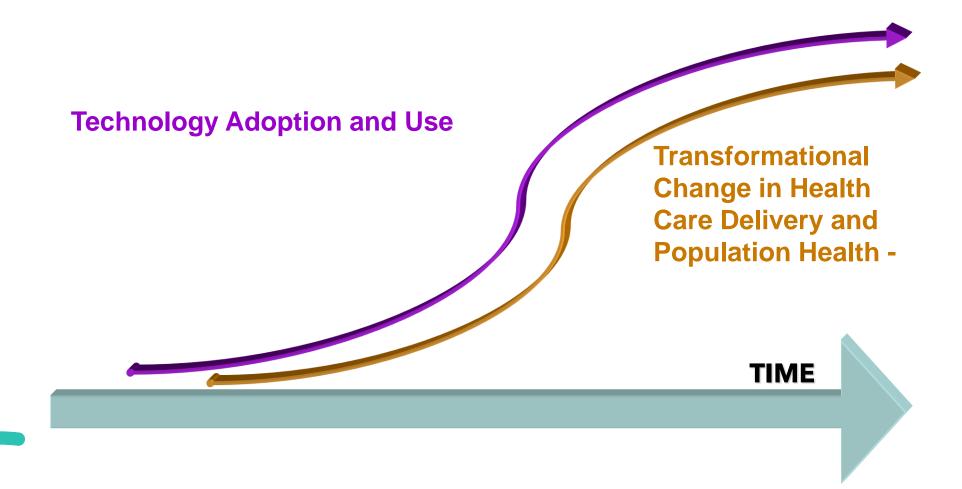
Improve Clinical and Financial Reporting and Analytics

#### Direction of IS

#### **Strategic Response**



# Health IT as a Critical Enabler for Health Care Transformation



#### The Challenge: Managing the "IS Investment"

Competition for attention and resources with the following initiatives and mandates:

- EHR Optimization
- Telehealth and Mobile
- Data Analytics
- Federal and State Mandates
- HIPAA Privacy and Security

"Do this with your existing staff and budget!!!"

#### Understand the following concepts

- Technology trends
- The role and function of information technology in operations
- Factors in guiding the development of information services, including the planning process
- Technology security requirements (e.g., HIPAA, governmental and organizational policies)
- Health information (e.g., data equipment, interoperability standards, decision support)
- Information systems continuity (e.g., disaster planning, recovery, backup, sabotage, natural disasters)
- Information systems planning and implementation (e.g., service architecture, technology lifecycles, obsolescence)
- Process for selecting an information system vendor
- The role of the CIO and the Information Steering Committee

#### Information Systems Planning

- Begin with a Strategic Information Systems Plan (SISP) that links IS priorities to the strategic goals and objectives of the organization.
- Treat information as an essential institutional resource that must be carefully managed.
- Instill a user-driven focus on IS planning and project development process.
- Create an Information Systems Steering Committee for software selection, IS planning and provide input on IS policies.
- Committee should be composed of administration, medical staff, super users, CIO and senior IS personnel.
- Committee should not be dominated by "techies".

#### Role of the CIO

- Assure and maintain the integrity and security of electronic data in a healthcare organization
- Oversee management of all information systems and telecommunications
- Develop strategic IS plan
- Stay apprised of new technologies to secure data
- Negotiate vendor contracts
- Member of the Information Systems Steering Committee

## Other Examples of Senior Level Roles of Health IT/HIT/HIM Professionals

- Senior IT roles
  - Chief Information Officer: CIO (Operatioal)
  - Chief Technology Officer: CTO (Strategic)
  - Chief Security Officer: CSO (Cybersecurity/Risk areas)
  - Privacy Officer (Compliance w/privacy laws)
- Senior Clinical Information Management Roles
  - Chief Medical Information/Informatics Officer: CMIO
  - Chief Nursing Information/Informatics Officer: CNIO

## IT Department Responsibilities

- Operations and technical support
- Application management, development and support
- Information security
- Network/Data Center operations
- Database administration
- Website development
- Telecommunications
- Desktop support

## Components of the Technology Environment

- Applications/Software the software used by administrative, clinical and support staff to process and store data, manage patients' records and provide information
- Hardware the actual servers (virtual and physical), network connections and devices used to access information
- Networks the wired or wireless connections that link the infrastructure together and enable accessibility of the applications and patient data

## Clinical Applications: EHR

- Electronic Health Record (EHR)
  - Longitudinal record covering multiple settings over time.
- EHR Functions
  - Clinical documentation
  - Medication administration
  - Electronic order entry (CPOE)
  - Results management
  - Electronic prescriptions
  - Data from inpatient stay or outpatient testing
  - Standards and interoperability
  - Outcomes reporting
  - Decision support



### Evolution of Electronic Health Record

Historical Milestones

Mid-1960s: El Camino Hospital/Lockheed Corporation created a new and more effective method of tracking patient data 1970s: the VA implemented Veterans Health Information Systems and Technology Architecture (VistA)

1980s: PC was more affordable; the VA declared VistA open source and made it available for public and private modification and use: the IOM analyzed the use of paper health records and published its results in 1991, citing EHR adoption as one of the key factors for improving patient care

#### **EHR Functions**

- Demographic Information
- Past Medical History
- Creation and Management of
  - Problem List
  - Medication List
  - Allergy List
  - Patient Orders
- Results Management
  - Interfacing Radiology and Laboratory results data
  - -Viewing and managing results



## Clinical Decision Support



- System uses EMR data to generate alerts and reminders to clinicians and care providers
- Examples
  - System generates alerts during CPOE and e-Prescribing
  - System generates alert during radiology procedure that patient is allergic to dye
  - During an outpatient visit, system reminds physician that patient needs a pneumonia vaccination
  - For chronic disease management, system generates a list of diabetic patients who have not had a retinal exam in the last two years

## Five Rights of CDS

- Combine all the tools and types to strategically use CDS within an organization following a "five rights" framework
  - Who, what, when, where and how
  - Emphasize the clear goals and objectives of all five components

Or else there will be alert fatigue and the purpose will be lost.

#### Evolution of Electronic Health Records

- ONC continues to define EHR Systems Capabilities and Certification Program
  - -To meet the capabilities defined by the ONC, EHR systems must;
    - have both basic and advanced features, including data storage, secure accessibility, information retrieval, access to current clinical data, and communication mechanisms to improve efficiency.
  - -They should also contain the following key functions;
    - Demographic data, medication, allergy, and problem lists; CPOE; CDSS; eprescribing; HIE; and privacy and security capabilities.



#### Evolution of Electronic Health Records

- Health Information Exchange (HIE)
- Standards and Interoperability
- Patient Engagement Capability





## National Standards for Health Information Technology

- Standards support certification of electronic health records and the ability to capture and report data with consistency.
- Have evolved over time and continue to evolve.
- Critical to capturing and transmitting data effectively across institutions, states, nationally and internationally.
- Developed and maintained by a number of global organizations.

#### Information Security

\*Hospital data breaches increased nationwide in 2020, affecting around 26.4 million people in the U.S., according to a <u>study</u> published Feb. 19, 2021 by cloud security platform Bitglass. Bitglass analyzed HHS data on hospital breaches in 2020. Six key findings:

- Healthcare breaches increased 55.1% from 386 in 2019 to 599 in 2020.
- Hacking and IT incidents accounted for 67.3 percent of data security compromises in the healthcare sector in 2020, affecting 24.1 million people.
- Unauthorized disclosures were the second most common type of breach (21.5 percent), followed by loss or theft (8.7 percent) and other breaches (2.5 percent).
- The average healthcare firm took 236 days to recover from a breach.
- The average cost per healthcare record breached increased from \$429 in 2019 to \$499 in 2020, costing healthcare organizations around \$13.2 billion in 2020.
- Thirty-seven out 50 states reported more breaches in 2020 than the previous year. Bitglass attributed this to rapid cloud expansion, use of personal devices and working remotely amid the pandemic.

<sup>\*</sup> Mitchell, H. (2021, February 22<sup>nd</sup>. Healthcare Data Breaches up 55.1% in 2020, Report Finds. https://www.beckershospitalreview.com/cybersecurity/healthcare-data-breaches-up-55-1-in-2020-report-finds.html

# HIPPA: The Health Insurance Portability and Accountability Act of 1996

"A major goal of the Security Rule is to protect the privacy of individuals' health information while *allowing covered entities to adopt new technologies to improve the quality and efficiency of patient care*." (hhs.gov)

#### \*HIPPA has five major rules:

- Privacy Rule: PHI Disclosure Rules
- Security Rule: Standards to safeguard PHI
- Breach Notification Rule: 60 Days to notify HHS
- Omnibus Rule: Merges HITECH into HIPPA
- Enforcement Rule: How investigation are conducted
- https://www.hipaaguide.net/hipaa-for-dummies/

# Initiating Project Management Life Cycle Closing Planning Monitoring / Controlling

#### Project Management Fundamentals

• Project management is a formal discipline. It consists of planning, organizing, and managing resources to reach

the successful completion of specific doals and

objectives.



#### Project Management Terminology

- A schedule management plan: document that contains information on how the schedule will be developed and controlled, how schedule processes will be measured, and what scheduling tool will be used.
- Duration: total number of work periods, as in days or work weeks, that are required to complete a scheduled activity.
- Effort: amount of work or labor hours necessary to actually perform a scheduled activity.
- Project schedule network diagrams: schematic depiction of scheduled activities and dependencies, which are logical relationships of activities. They model sequenced activities.



#### Project Management Terminology

- Activity relationships: diagramming technique that illustrates the activity's logical relationships: finish-to-start, start-to-start, finish-to-finish, and start-to-finish.
- Schedule: documents when the project activities will be completed.
- Critical path: longest path of activities through the schedule network; it establishes the earliest date by which the project can be completed.
- Float (sometimes referred to as slack): amount of time an activity can be delayed and not push back the early start of a successive activity.
- Scheduling tools: computerized project management software applications that help the project manager develop the schedule and provide information to manage the project.

## Post Go-Live Support

- Goals
  - End user satisfaction
  - Maximize reliability and productivity
- Support Team
  - -Super-Users
  - -Help Desk Staff
  - -Application and Operations Team
  - Networking Team
  - Workstation or Client support team

## Upgrading

- Factors to consider when planning an upgrade
  - New function and need for training
  - Hardware/network upgrades
  - How will the upgrade affect current users and current function
  - Downtime
  - Other Impacts on the organization
- Structured approach to system upgrades
  - Use standard and approved processes
  - Develop a test plan
    - Testing environment, test data, test cases and scenarios, testing workstations, testing resources and time
  - Develop a detailed training plan
  - Update documentation

#### **Moving Forward**

- Working with users
  - Listening
  - -Being responsive
  - Tracking and reporting issues
- Working with vendors
  - Maintaining a positive business relationship
  - Ensuring vendor meets contractual obligations

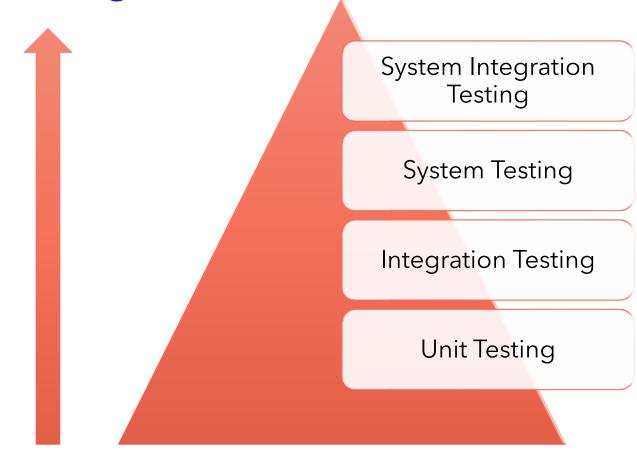


## The Importance of Testing

- Validates that the system meets documented requirements
- Assures end-users in clinical environments that the system is "safe" in a clinical setting
- Provides an opportunity to assess usability
- Reduces risks associated with
  - Poor end-user satisfaction
  - Poor performance
- Builds confidence in the IT Department



## Types of Testing



#### Training Plan

- Develop Strategies for Providing User Training (train-the-trainer approach, standard classroom-style training, web-based training, one-on-one training)
- Identify "Super Users"
- Plan includes
  - Objectives
  - -Who will be trained?
  - -When?
  - -Where?
  - Educational materials
  - Training environment, data



#### **Training**

- Critical to prevent medical error
- If larger implementation, develop a training plan that outlines user needs, training methodology
- ADDIE design model
  - Five Stages in ADDIE Model
    - Analysis
    - Design
    - Development
    - Implementation
    - Evaluation

#### **Customer Service**

- Levels of customer support
  - Help desk and first level support
  - Monitor number of issues and number of calls where issue was resolved during the call
  - Will utilize software for tracking issues
- Second level or application support
  - Troubleshoot problems and interface with vendor to find resolutions
- Third level issue must be resolved by the vendor

#### Statistics!

- In 2017
  - According to OCR, there were 477 healthcare breaches affecting
     5.6 million records
  - The largest reported data breach was less than 700,000 in 2017, a far cry from two breaches in 2016 that totaled almost 20 million records
  - Providers made up the vast majority of OCR reports at 80%. Health plans represented 12%

https://www.fiercehealthcare.com/privacy-security/healthcare-data-breaches-2017-ransomware-protenus-beazley-group-ocr

#### Privacy, Confidentiality and Security

#### Privacy

 Refers to the right of an individual to be left alone and to keep his or her personal information secret.

#### Confidentiality

- Relates to sharing information with a focus on sharing information on a "need to know" basis. The patient may share personal information with the physician, but the physician must keep that information confidential.

#### Privacy, Confidentiality and Security

- Security
  - Refers to the mechanisms to assure the safety of data and the systems in which the data reside.



#### Types of Security

- User Security
  - Identification of system users and allowing access to the system by the appropriate users.
    - Requires defined policies for passwords and which user roles can access which function and data.



## Encryption

- Communication is unreadable to unauthorized viewers
- Uses electronic public and private keys
- The encryption scrambles the content until someone with the correct key opens it



## Additional Security Measures

- Password policies
  - Password complexity
- Domain-based network environment
  - Domain-based world where a server manages users, devices, software and domain policies
  - Manages all objects that are part of its domain and enforces rules on network assets

#### HIPAA and Risk Analysis

- HIPAA The Health Insurance Portability and Accountability Act of 1996 and subsequent revisions
- Title II of HIPAA contains five rules pertaining to administrative simplification and privacy and security
  - Privacy Rule
  - -Security Rule
  - Transaction Code Set Rule
  - Unique Identifier Rule
  - Enforcement Rule

## Protect Health Information (PHI)

- All individually identifiable health information created, transmitted, received or maintained by a healthcare institution
  - Identification of an individual
  - Health condition
  - Treatment
  - Provision/payment for healthcare

## Examples of Identifying Information

- Name
- Address
- City
- County
- Names of relatives
- Names of employers
- Photographic images
- DOB
- Telephone number

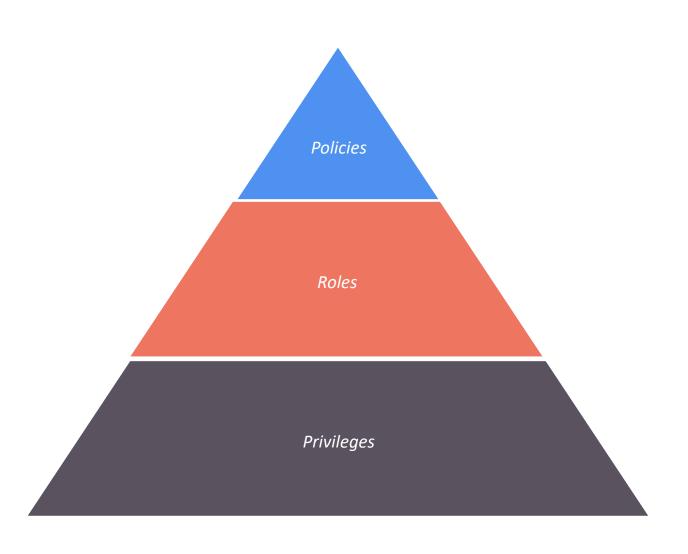
- Fax number
- Email address
- Social security #
- Medical record #
- Certificate/license

## Data Integrity

- Requirements for maintaining data integrity
  - Disaster recovery
  - Ensuring data validity
    - Editing against list of values
    - Required Fields
    - Required Values
    - Compliance with data standards

## Role-Based Security

- The job a user has will dictate what you have the right to access and to disclose
- ONLY access information that is absolutely needed and that the user has the right to see
- Minimum necessary!
- Authentication may include electronic signature required for a document



#### **Best Practices**

- Use of strong passwords
- Encryption of all ePHI transmitted within the network and use of a VPN for remote access
- Use of a "standby mode" when clinical users leave a screen with ePHI
- Restricted download of aggregate patient data to end-user devices (hard drives, flash drives, other media)
- Use of an Intrusion Detection System
- Proactive auditing



## Disaster Recovery and Business Continuity

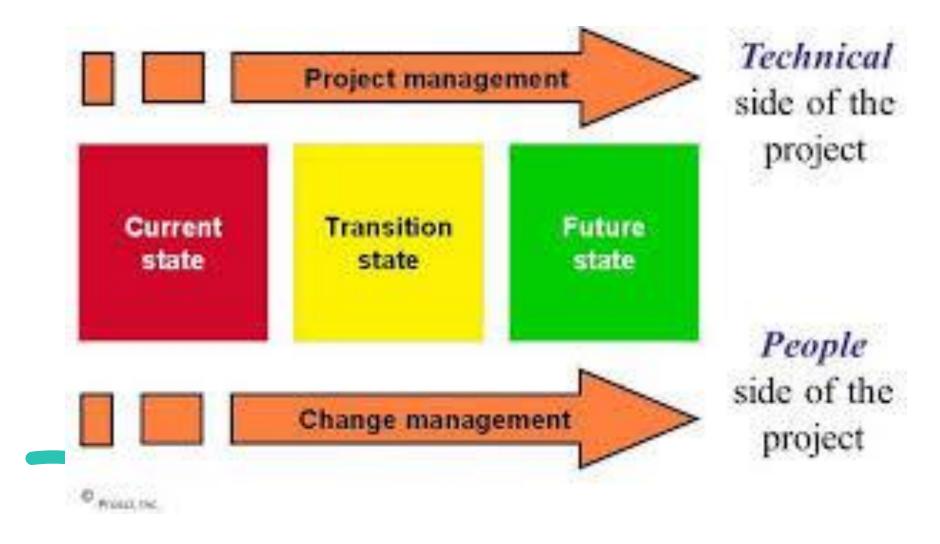
- Disaster Plan
  - Plan outlines how the system can be returned to operating status in the event of a catastrophic failure
  - Can be complex in a large healthcare organization because of the numbers of individual systems

Moore Hospital Oklahoma

# Change Management and HIT Systems Implementation

- Change is Disruptive
- Change in HIT systems comes with unique challenges
  - End-user or executive resistance to change
  - -Specialized resources needed for the change
  - Contention for current resources to manage current workload and implement change
  - Requires formalized, complex planning
  - Requires effective and ongoing communications

## Change Management



## The "People" Side of Change Management

- Increase urgency
- Build the guiding team (governance)
- Get the right vision
- Explain benefit and get buy-in from decision makers
- Empower Action put the right teams in place
- Implementation plan, training plan, support plan
- Create Short Term Wins Communicate
- Project Milestones, Successes, Benefits
- Don't let up
- Make it stick



## HIT Professionals Role in a Quality Culture

- Provide the right information to users at the right time
- Provide the right amount of right information to users
- Provide the right information to users in the right place

#### Ethical Duties HIT Professionals

- Represent credential accurately
- Protect patient privacy
- Respect patients, employers, and coworkers
- Respond to unethical practices by others

### Study Suggestions

- Review the BOG Examination Reference Manual
  - Take the time to review the entire document
  - Understand the key concepts we discussed today
  - Take the "Practice Exam"
- During the Exam...
  - Beware the Governance Section
  - Take your time reading the questions!!!
  - Usually all the answers could be possibilities and there are 2 answers that will seem like the best answer
  - Your challenge is to pick the answer that truly represents the concept in the question
  - m't discount the value of your experience

## Interesting Information

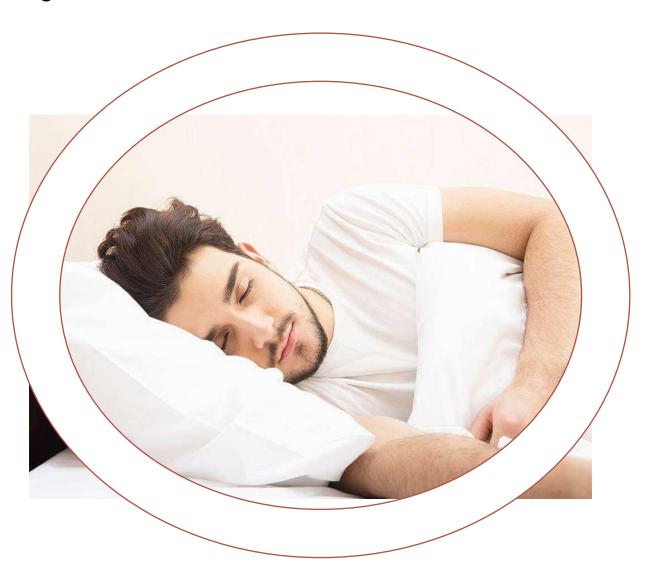
#### Percentage and Number of Exam Questions in Each Knowledge Area

Knowledge Area	Percentage	Number of Questions
Healthcare	14%	28
Management and Leadership	13%	26
Finance	12%	24
Human Resources	11%	22
Quality and Performance Management	10%	20
Business	9%	18
Healthcare Technology and Information Management	9%	18
Laws and Regulations	8%	16
Professionalism and Ethics	8%	16
Governance and Organizational Structure	6%	12
TOTAL	100%	200

 https://medium.com/board-of-governors/top-5-lessons-from-board-of-governorspractice-exam-61572a374ee8

# Study Skills/Test Taking Tips/Wrap Up: Preparation - Night before the test





## How to Prepare

- Create a study schedule, determine when you would like to take the exam and then plan your timeline which leads up to that date.
- Perform your own independent research, use authentic sources for your study materials.
- Create quality summary notes. Study these notes over and over.
- Write the content from memory onto paper and then compare these notes to the original notes.

## How to Prepare

- Determine which topic areas you are most comfortable with and which ones you want to "brush up" on.
- Answer as many practice questions you can and identify your areas of weakness. Focus on these areas. Add answers to incorrect questions to your summary notes.
- Decide how much time and effort to expend on studying each topic area, based on the relative "weight" of the topic area (per content outline) and your experience and comfort level.

#### Test Taking Tips

- Give yourself plenty of time to locate the testing facility.
- Arrive early to give yourself time to settle your nerves prior to the exam.
- Read each question carefully, focusing on what is being asked. If you are uncertain about the answer but
  nevertheless want to give a tentative answer at the time, mark the test question to indicate that you want to
  review the test question and your answer if time allows. Go back to questions marked in this manner after
  completing the entire test.

### Test Taking Tips

- Read all options before selecting your answer. Always select the best choice.
- Do not over analyze or try to "read into" a question. Questions are not written to be tricky. Do not assume additional information beyond what is given in the test question. All information necessary to answer the question will be given in the text of the question or scenario.
- If there are questions including the words "not," "except," or "least" answer these with particular care because you will be looking for the exception. These questions involve a reversal of your usual thought patterns.
- Pay close attention to key words such as "best," "most," "primary," or "usually." These words indicate that other options may at times be correct, but given the wording or situation in the test question, you must judge which option is the best.

#### Test Taking Tips

- When guessing, do so by the process of elimination. Treat each option as a true or false statement, and eliminate those that you would not select. Narrow your choices and then make an educated guess.
- The first time through the exam, mark an answer for every item, there is no penalty for guessing. Leave time at the end of the testing period to go back to the questions you marked for review. If you are running out of time, leave a minute or so at the end to complete all of the blank questions randomly. Remember, you have a probability of answering a question correctly by chance alone, so don't miss any!
- If reading English is difficult for you because English is not your primary language, maximize your time by reading and answering all the shorter questions first. After completing all of the short questions, go back and attempt to answer the longer questions.

### Knowledge Preparation- Morning of test





#### Test Taking Steps — Once on site

- 1. Calculator on screen version will be available
- 2. Write down all the things you need to remember BEFORE you start
- 3. Go thru test a first time answering only questions you can quickly and confidently answer.
- 4. Go thru test a second time, spending more time on harder questions. LEAVE the ones you just don't know the answer to for the last round.
- 5. On this last round answer the questions you just don't know... remember that in the end you have a 25% chance of getting it right if you select a random answer.

#### **FAQs**

What score do I need to pass?

The minimum passing score is the minimum number of correct answers needed to pass the BOG examination. The score report indicates a "Pass" or a "Fail." The raw score or number of correct answers, on the total examination determines Pass/Fail status. Additional detail is provided in the form of raw scores by major content categories of the BOG examination content outline.

Different editions of the BOG examinations are equated to ensure that a candidate is not penalized by taking a slightly more difficult edition of the examination. Equated examinations may have different minimum passing scores, but the equating procedure ensures that the levels of candidate knowledge are equivalent across editions.

#### **FAQs**

• What if I fail the BOG examination? How often can I take it?

There is no limit to the number of times you may attempt the BOG examination. Each attempt requires an application and fee and there is a wait period before the test can be taken again.

### Questions?



# An important management principle that should guide the development of information systems in healthcare organizations is to:

- a) Treat information as an essential organizational resource.
- b) Delegate all decisions about information technology to technical specialists.
- c) Employ consultants to set priorities for systems to be developed.
- d) Always buy the newest system available to avoid technical obsolescence

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## One of the major elements of an information system strategic plan includes the:

- a) Request for proposals from vendors
- b) Specifications for computer program documentation.
- c) Specifications for computer hardware maintenance.
- d) Software development plan.

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# Selection of an information system in a healthcare organization should begin with:

- a) Meeting with several information systems vendors to determine the scope of available technology.
- b) Hiring an information systems consultant to determine the organization's strategic needs.
- c) Development of an information systems plan that supports the organization's existing strategic objectives.
- d) Evaluation of available hardware and software to best determine what meets the organization's needs.

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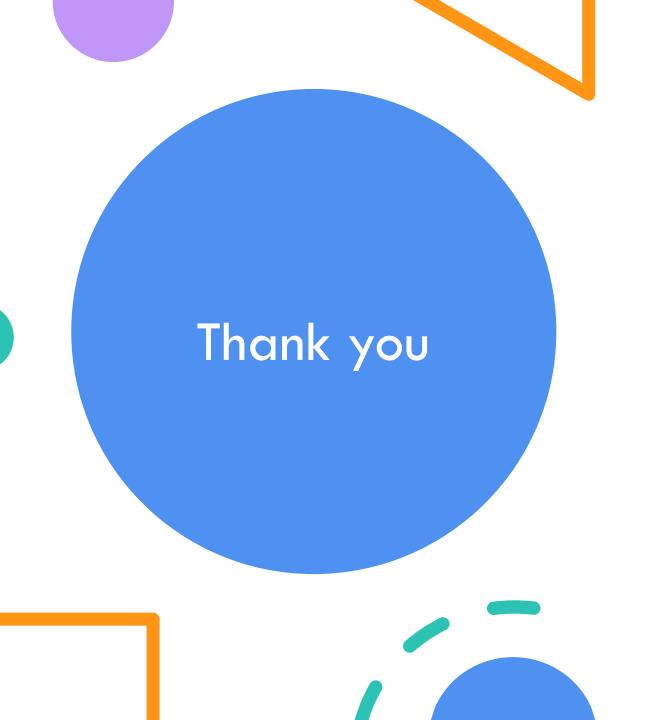
- A comprehensive information security policy should include all of the following elements except:
  - a) Management Policies
  - b) Data back up and recovery
  - c) Physical security
  - d) Technical controls

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In the IT System Development Life Cycle, which is the most important step:

- a) System Analysis
- b) System Design
- c) System Acquisition
- d) System Implementation

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