CPHQ Review Course

This course is designed to help focus the study efforts of candidates planning to take the Certified Professional in Healthcare Quality (CPHQ) examination. Completion of a NAHQ CPHQ Review Course product does not guarantee a passing grade on the CPHQ examination.

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Agenda

- Introduction
- Review of handouts
- About the CPHQ Exam and test-taking tips
- Foundations, techniques, and tools
- Information management
- *Using Data For Improvement: The Toolkit*
- Strategy and leadership
- Continuous readiness
- Change management and innovation
Crosswalk (Exam Content and Q Solutions, 2nd ed.)

- Content outline included in Candidate Examination Handbook
- Developed from task functions identified by Healthcare Quality Certification Commission (HQCC)
- Percentage of questions included from each section
- Types of questions
- Page numbers where information is found

About the CPHQ Exam and Test-Taking Tips
## About the CPHQ Exam

- Computerized comprehensive, job-related, objective test
- 140 multiple-choice questions (15 unscored)
- Distribution of questions
  - Recall 32%
  - Application 50%
  - Analysis 18%

## Application questions

Test ability to interpret or apply information to a situation.

## Analysis questions

Test ability to evaluate, solve problems, or integrate a variety of information or judgments into a meaningful whole.
## About the CPHQ Exam

- Questions are written by practitioners in healthcare quality management and case, care, disease, utilization, and risk management.
- Test content covers important aspects of the healthcare quality professional’s job.
- Content is based on an international practice analysis.

<table>
<thead>
<tr>
<th>About the CPHQ Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Each question on the test relates to one of the tasks on the CPHQ Exam Content Outline.</td>
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<tr>
<td>Each task was rated as significant to practice by quality management professionals.</td>
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<tr>
<td>The tasks are significant to practice in the major types and sizes of healthcare facilities and organizations, including managed care.</td>
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### About the CPHQ Exam

- **Management and leadership**  
  - 28 questions (22%)
- **Information management**  
  - 30 questions (24%)
- **Performance measurement and improvement**  
  - 47 questions (38%)
- **Patient safety**  
  - 20 questions (16%)

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### About the CPHQ Exam

- Deleted through 2012 and reinserted beginning January 1, 2013
  - The Joint Commission
  - National Committee for Quality Assurance (NCQA)
  - Regulatory information
  - Health Insurance Portability and Accountability Act (HIPAA)
- **New addition**  
  - Patient Safety
Test-Taking Tips

• Calculators are allowed. *(Candidate Examination Handbook, p. 8)*
• Answer questions you are comfortable answering.
• Pass over those for which you draw a blank.
• On the actual test, a check box allows you to return to skipped questions.

Test-Taking Tips

• Read carefully for words such as *except*, *not*, and *least*.
• Beware of choices such as *always* and *never*.
• Anticipate the answer, and then look for it.
• Consider all alternatives.
• Exclude obviously wrong answers.
Test-Taking Tips

- Relate each option to the question.
- Balance options against each other.
- Use logical reasoning.
- Choose answers that contain words you know.
- Watch your time, and pace yourself.
- Don’t be distracted by others taking the test.
- Remember that there is no penalty for guessing.

Scheduling the Test

- You can apply online at www.goamp.com.
- If eligibility is confirmed, you can proceed to schedule an examination appointment.
- Eligibility to take the test is valid for 90 days.
- Appointments can be scheduled online 24/7.
- You can take the test within a week.
- Testing times are 9 am and 1:30 pm.
Day of the Exam

- Relax the night before. If you don’t know the material by then, you don’t know it.
- Testing centers are typically located in selected H&R Block offices.
- Allow plenty of time to travel to the testing center; plan to arrive 30 minutes early. (Candidates arriving more than 15 minutes after the scheduled testing time won’t be admitted and will need to pay the fee again to take the test.)
- Allow yourself 3 hours to take the exam.

Day of the Exam

- Bring two forms of ID (one a legal government-issued photo ID and one verifying name and signature).
- Before beginning the exam, you will capture your photograph using the computer terminal (the photo will also print on your score report).
- You can take a break, but you will not be allowed to make up the time.
Day of the Exam

Upon arrival at the testing center, you will
• have your identification checked
• log in
• have your photo taken
• take a 15-minute pretest to familiarize yourself with the keyboard and questions
• be given 3 hours to complete 140 questions.

Day of the Exam

• Use “!” to write a note to yourself or to the exam committee (*Candidate Examination Handbook*, p. 8).
• Click on “Cover” when finished. (You cannot reenter the exam after clicking on “Cover.”)
• After completing the exam, answer the evaluation questions concerning the test-taking process.
  (Time taken to answer these questions does not count toward the 3-hour limit.)
Day of the Exam

- Exit the system.
- Receive the score report from the proctor.
- Total time: 3.5 to 4 hours
- Log on to www.goamp.com for a preview of software navigation.

Self-Assessment Exam

- Diagnostic tool at www.cphq.org and www.nahq.org
- 65 questions similar to the exam questions in content and difficulty
- Presented in same computer format as the exam
- NAHQ members: $65  nonmembers: $95
- Available online for up to 90 days from date the order is placed
After the Exam

- Testing agency forwards list of passing candidates to HQCC monthly (first week of month for previous month)
- HQCC sends a congratulatory letter, CPHQ pin, and informational items approx. 2 weeks after the close of the month.
  - Exam passed on first of month, expect to receive packet in about 6 weeks
  - Exam passed at end of month, expect to receive packet in about 2 weeks

After the Exam

- The official certificate for framing will arrive separately about 4 weeks after you receive the HQCC packet.

GOOD LUCK!
Q Solutions: Essential Resources for the Healthcare Quality Professional, 2nd edition, is the recommended text for the review course.

Section 1
Foundations, Techniques, and Tools
Objectives

- To identify key concepts in
  - quality management approaches
  - data management
  - patient safety
  - confidentiality
  - peer review
  - evidence-based quality management.

Definitions

Quality Management Philosophy

- *Healthcare quality* is the extent to which health services provided to individuals and patient populations improve desired health outcomes (Institute of Medicine).
Definitions

• *Total quality* is an attitude, an orientation, that permeates an entire organization and the way the organization performs its internal and external business.

Quality Pioneers

• Statistical process control (SPC)
  - Walter Shewhart
  - Plan-Do-Check-Act (PDCA)
  - Shewhart Cycle
• World War II
• War Production Board
• Japanese quality revolution
Quality Pioneers

- W. Edwards Deming
  - Plan-Do-Study-Act (PDSA)
  - Deming wheel
- Joseph Juran
- Phil Crosby
- Dr. Ernest Codman
- Dr. Avedis Donabedian
- Dr. Donald Berwick

Performance Assessment

- Quality improvement (QI)
  - Early 1990s: Total quality management (TQM)/QI
  - Collaborative culture
    - Focus on processes
    - Quality defined by customer
    - Reduction in variation
    - Focus shifted to systems and processes
Current and Evolving Approaches

- Six sigma: Uses statistical analysis to measure and improve performance
  - Elimination of errors in processes
  - Normal distribution (bell-shaped curve) of errors
  - Six standard deviations from the mean (only 3.4 defects per million opportunities)

Current and Evolving Approaches

- Lean enterprise: Emphasizes reducing waste and focusing on activities that add value for the customer
  - Applies value stream analysis
  - Eliminates waste
  - Makes changes in a short period of time
  - Uses cross-functional teams
Current and Evolving Approaches

• Rapid cycle improvement
  - Identifies and prioritizes aims for improvement
  - Gains access to methods, tools, and materials for evidence-based QI

Focus on Patient Safety

• Elimination of medical errors
  - Creating a safe environment
  - Improving clinical patient safety
  - Analyzing where and how patients are at risk
  - Integrating risk management
IOM Priorities for Patient Safety

- Patient safety and harm
  - Direct relationship between quality of care and patient outcomes
- 3 types of quality issues
  - Underuse of care
  - Overuse of care
  - Misuse of care (errors)

Establish Safety Goals

- Establish patient safety as a visible commitment to the philosophy of putting patients first.
- Move from blaming people to improving processes.
- Improve use of technology to prevent and detect error.
- Use data to identify and measure improvements.
Fair and Just Culture

- Everyone makes mistakes and implements work-arounds. Emphasize the importance of learning from mistakes and near misses.
- The individual is accountable to the system. The greatest error is to not report a mistake, preventing the system and others from learning.
- A new culture of patient safety is successfully created when everyone advocates for safety.

Performance Problems as Safety Issues

1. Focus on the issue or error, not the outcome.
2. Interpret the error (intentional or unintentional?).
3. Identify contributing factors.
Approaches to Improving Safety

- Improve medication practices.
- Improve emergency services.
- Improve workplace safety.
- Prevent nosocomial infections.

Focus on Patient Safety

1. Structure
   - Facility design
   - Supplies
   - Policies and procedures
Focus on Patient Safety

2. Environment assessment
   - Lighting
   - Surfaces
   - Temperature
   - Noise levels
   - Storage
   - Ergonomics

Focus on Patient Safety

3. Equipment and technologies
   - Examination of labels, instructions, and safety features
Focus on Patient Safety

4. Processes: Evaluation of whether or not redesign would improve safety
   - Complexity
   - Inconsistencies
   - Time constraints
   - Amount of human intervention (lack of automation)

Focus on Patient Safety

5. People
   - Complexity
   - Attitudes and motivation
   - Health
   - Education and training
   - Cognitive functioning
Focus on Patient Safety

6. Leadership and culture: willingness to
   - allocate resources
   - analyze processes
   - implement changes
   - support nonpunitive error reporting
   - promote evidence-based practice.

Steps to Creating a Safety Culture

• Recognize that leadership owns the culture, whether the leaders want to or not.
• Have a clear vision of the culture required.
• Compare where the organization is to its stated values and goals.
• Create tools to reinforce the behavior and culture desired.
• Link culture and performance review every year.
Patient Safety Program

- Patient safety officer
- Program development and coordination
- Link with strategic planning
- Link with quality management, risk management, information management, and infection control
- Structure
- Mechanisms for program coordination

Patient Safety Program

- Communicating with patients about safety
- Safety education
- Program goals (consistent with organization’s mission)
- Scope of the program
- Safety improvement activities
- Definition of terms
- Prioritization of improvement activities
# Patient Safety Program

- Routine safety data collection and analysis
  - Incident reporting
  - Medication error reporting
  - Infection surveillance
  - Facility safety surveillance
  - Staff perceptions of patient safety and suggestions for improvement
  - Staff willingness to report errors
  - Patient and family perceptions of patient safety and suggestions for improvement

- Identification, reporting, and management of sentinel events
  - Proactive risk reduction
  - Identification of high-risk processes
  - Failure mode, effects, and criticality analysis
### Patient Safety Program

- Reporting of results
  - to the safety program
  - to organization staff
  - to executive leadership and the governing body

### Sample Events to Report

- Suicide
- Infant abduction or discharge to wrong family
- Rape
- Hemolytic transfusion reaction
- Wrong-site surgery
- Falls
- Medication errors
- Adverse drug events
- Missing patients
- Major loss of function
- Death
Role of External Reporting

- Allows lessons to be shared so others can avoid the same mishaps
- Can lead to improved safety
- Sends alerts about new hazards generated
- Allows sharing of information about experience of individual institutions in using new methods to prevent errors
- Reveals trends and hazards that require attention and leads to recommended best practices

Principles for Safer Healthcare: Human Factors

Process

- Simplify work processes and standardize procedures.
- Reduce reliance on memory and vigilance.
- Use checklists and trigger tools.
- Use constraints and forcing functions.
- Eliminate look-alike/sound-alike names.
- Provide education and training.
- Eliminate design failures.
- Use technology appropriately.
Principles for Safer Healthcare: Human Factors

Organization

- Increase feedback and direct communication.
- Make rounds.
- Emphasize teamwork and crew resource management.
- Drive out fear of reporting.
- Solidify leadership commitment and safety culture.
- Provide training programs for staff.
- Make environmental adjustments.
- Adjust work schedules.

Confidentiality Principles

Confidentiality

- Organizations are required by state and federal statutes to maintain the security, integrity, and confidentiality of patients’ personal data and other information.
- Organizations must protect records against loss, defacement, tampering, and unauthorized use.
Effective Confidentiality Policies

- Identify individuals with access.
- Delineate accessible information.
- Keep information confidential.
- Specify conditions for release of information.
- Specify conditions for removal of medical records.
- Protect personal health information.
- Establish a policy for handling root cause analysis (RCA).
- Establish mechanisms for securing information.

HIPAA (2013)

- Requirements for release of health information, HIPAA 1996
- Policies for protection of personal health information, HIPAA 2002
  - Names; all geographic subdivisions smaller than a state
  - Dates: Birth, admission, discharge, death, all ages over 89 unless aggregated
  - Telephone/fax numbers
  - E-mail addresses; URLs, IP addresses
  - Medical record, health plan, beneficiary numbers
  - Certificate/license; vehicle ID; biometric identifiers
## Medical Records Confidentiality

Healthcare facilities must

- maintain adequate medical records as the basis for planning care and communicating
- have clear policies regarding access to records
- preserve confidentiality (in accordance with physician-patient privilege and the Patients’ Bill of Rights).

## Information Security Methods

- Separate storage of some portions of medical records
- Restricted access to computer files
- Adequate backup plan and firewalls for computer applications
- Requirement of signed forms for release of information
Release of Information

Release *without* written authorization (as regulated by national and state statute) may include:
- governing body representatives
- the organization director
- healthcare personnel
- quality improvement staff
- health information management staff.

 Credentialing Process

- Process used for
  - appointments and reappointments
  - granting, renewing, and revising clinical privileges
- Organization credentials applicants using clearly defined process
- Credentialing process based on recommendations by organized medical staff
- Credentialing process approved by governing body
- Credentialing process outlined in medical staff bylaws
Credentialing Process

- Clearly defined procedure for processing applications for the granting, renewal, or revision of clinical privileges
- Procedure for processing applications for the granting, renewal, or revision of clinical privileges approved by organized medical staff
- Applicant submits statement that no health problems exist that could affect ability to perform the privileges requested

Credentialing Process

- Criteria
  - Current licensure or certification
  - Specific relevant training
  - Evidence of physical ability to perform the requested privilege
  - Data from professional practice review by an organization(s) that currently privileges the applicant (if available)
  - Peer or faculty recommendation
  - When renewing privileges, review of the practitioner’s performance within organization
Credentialing Process

- Peer recommendations
  - Medical/clinical knowledge
  - Technical and clinical skills
  - Clinical judgment
  - Interpersonal skills
  - Communication skills
  - Professionalism

- Expedited process: committee of 2 members

- Temporary privileges
  - Need, new applicant waiting

FPPE

- Period of focused professional practice evaluation (FPPE) implemented for all initially requested privileges

- Organized medical staff develops criteria for evaluating performance of practitioners when issues affecting provision of safe, high-quality patient care identified
FPPE

- Performance monitoring process clearly defined and includes
  - criteria for conducting performance monitoring
  - method for establishing monitoring plan specific to requested privilege
  - method for determining duration of performance monitoring
  - circumstances under which monitoring by external source required

Clinical Privileges

May be defined several ways and categorized by
- practitioner specialty
- level of training and experience
- patient risk categories
- lists of procedures or treatments
- any combination of the above.
Reappraisal

- Conducted at time of reappointment to medical staff or renewal or revision of clinical privileges
- Based on ongoing monitoring of information

Reappraisal

- Includes confirmation of adherence to medical staff membership requirements, rules and regulations, and policies
- Considers relevant practitioner-specific information
- Considers results of peer review and other performance evaluations
Credentials Files

- Credentials files contain clear evidence that the full range of privileges has been included in the reappraisal, particularly privileges for:
  - performing high-risk procedures
  - treating high-risk conditions.
- Information is substantive and practitioner specific.

Credentials Files

The effectiveness of the reappraisal process may be measured by objective documentation that the individual’s privileges were increased, reduced, or terminated because of:
- assessments of documented performance
- nonuse of privileges for high-risk procedure or treatment
- emergence of new technologies.
Credentials Files

- Departmental or major clinical service recommendations may be made by a department, chairperson, or chief of staff.
- Clinical privileges may change over time.

OPPE

Ongoing professional practice evaluation (OPPE) includes

- clearly defined process facilitates evaluation of practitioner’s professional practice
- data collected determined by individual departments and approved medical staff
- information from OPPE used to determine whether to continue, limit, or revoke any existing privilege(s)
## Fair Hearing & Appeal Process (2013)

- Addresses quality of care issues
- Designed to provide fair process may differ for members/nonmembers medical staff
- Has mechanism to schedule hearing
- Has identified procedures for hearing to
- Identifies composition of hearing committee impartial peers
- With governing body, provides mechanism appeal adverse decisions bylaws

## Medical Peer Review

- Definition: medical staff involvement in measuring, assessing, and improving performance of licensed practitioners
- Methods for selecting peer review panels for specific circumstances
  - Setting time frames
  - Establishing circumstances requiring external peer review
  - Providing for participation by individual whose performance is being reviewed
### Medical Peer Review

- Medical staff must be involved.
- Outcomes and processes should be measured.
- Performance in relation to design of processes and expected or intended outcomes should be assessed.
- Individuals with clinical privileges whose performance is questioned as result of QI activities should be evaluated.

### Effective Peer Review Process

- Consistency: Peer review is conducted according to defined procedures.
- Defensibility: Conclusions reached through the process are supported by a rationale.
- Balance: Minority opinions and views of the person being reviewed are considered and recorded.
Effective Peer Review Process

- Peer review activities are considered in reappointment process.
- Tracking of conclusions from peer review is done over time.
- Actions based on conclusions are monitored for effectiveness.

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Effective Peer Review Process

- Findings, conclusions, recommendations, and actions are communicated to appropriate entities.
- Recommendations to improve performance are implemented.
- Physician leaders have a role in improving clinical processes used for clinical privileging.
Documenting Peer Review

- Medical records are highly confidential.
- Policies and procedures define access and circumstances.
- Legal representative is consulted.
- State laws govern peer review.
- Peer review files are marked confidential.
- Minutes are usually protected.

Practitioner Profiles

- Profiles are based on performance.
- Profiles are provided to each physician or provider on a regular basis.
- Organizations may use risk-adjusted software.
- Evidence-based medicine determines metrics used.
- Data are timely and accurate.
### Physician Profiles

- Profiles are process focused.
- Physician data are grouped by specialty type or specific diagnoses.
- Data are reported regularly.
- Physician champions talk directly with medical staff about numbers.

### Physician Data

- Data are meaningful to physicians.
- Data represent major service lines and patient safety issues and include outpatient data.
- National targets and benchmarks are used.
- Data are easily accessed and used.
- Profiles vary according to physician’s specialty or area of practice.
### Physician Profiles: Examples

<table>
<thead>
<tr>
<th>Patient volume</th>
<th>Use of unapproved abbreviations</th>
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<tbody>
<tr>
<td>Length of stay</td>
<td>Severity-adjusted mortality rate</td>
</tr>
<tr>
<td>Average length of stay</td>
<td>Severity-adjusted morbidity rate</td>
</tr>
<tr>
<td>Diagnosis-related groups</td>
<td>Death or loss of function related to nosocomial infection</td>
</tr>
<tr>
<td>Average cost per case</td>
<td>Unexpected transfers to intensive care unit</td>
</tr>
<tr>
<td>Conformity with system-wide initiatives (e.g., use of deep vein thrombosis/pulmonary embolism prophylaxis)</td>
<td>Unexpected death actions</td>
</tr>
<tr>
<td>Legibility of records</td>
<td></td>
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### Physician Profiles: Examples

<table>
<thead>
<tr>
<th>Unplanned return to surgery</th>
<th>Medication errors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedure complications</td>
<td>Aspirin given within 24 hours of arrival</td>
</tr>
<tr>
<td>Charges for the patients treated by the physician compared with those for physicians in the same specialty</td>
<td>Aspirin given at discharge</td>
</tr>
<tr>
<td>Discharges</td>
<td>Angiotensin-converting enzyme inhibitors prescribed at discharge</td>
</tr>
<tr>
<td>Full-time equivalent (actual vs. budget)</td>
<td>Beta blockers given within 24 hours</td>
</tr>
<tr>
<td>Patient falls</td>
<td>Smoking cessation counseling</td>
</tr>
<tr>
<td></td>
<td>Patient satisfaction</td>
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Profile Confidentiality

- Develop a mechanism to track activity.
- Use a log or sign-out sheet (date of request, reason for request, name of person reviewing, pertinent notes).
- Establish circumstances for copies in policies and procedures.
- Develop a mechanism for release of information.
## Utilization Review

- **Internal review**
  - Policies and procedures to ensure confidentiality during medical record review process
  - Patients to be informed of policies and procedures related to utilization management
- **External review**
  - Telephone review
  - Onsite review by external agencies

## Research vs. Quality Improvement

<table>
<thead>
<tr>
<th>Scientific Process</th>
<th>Quality Improvement</th>
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<tbody>
<tr>
<td>Identify information needs, ask question to be investigated.</td>
<td>Identify process improvement, survey literature, and construct flowchart of process.</td>
</tr>
<tr>
<td>Define variable(s) or elements for which data are required.</td>
<td>Define customers and problem.</td>
</tr>
<tr>
<td>Formulate a plan of study or hypothesis.</td>
<td>Formulate a plan.</td>
</tr>
</tbody>
</table>
## Research vs. Quality Improvement

### Scientific Process
- Choose the research design and collection tools or instruments.
- Collect the data.
- Analyze the data.
- Display the data.
- Report data and findings.

### Quality Improvement
- Choose one or a combination of basic or quality management planning tools.
- Collect the data.
- Analyze the data; look for root causes.
- Display the data.
- Report data and findings.

### Scientific Process
- Draw conclusions.
- Act upon recommendations deduced from conclusions.
- Continue to monitor the process.
- Evaluate and communicate conclusions.

### Quality Improvement
- Draw conclusions.
- Act upon recommendations deduced from conclusions.
- Continue to monitor the process.
- Evaluate and communicate conclusions.
- Hold the improvement.
QM and Research Continuum

- Underlying assumptions of design, measurement, and interpretation are the same.
- Level of research rigor that best answers the question is used, balancing rigor and practicality.

Section 2

Information Management
Objectives
To identify key concepts in
- management of quality information
- decision support
- risk adjustment
- comparisons and benchmarking
- evidenced-based information and practice
- statistical techniques and tools
- balanced scorecard

Systematic Healthcare Quality
• Development of quality information system
  - Data: abstract representations of facts, concepts, and instructions
  - Information: data translated into results and statements useful for decision making
Quality Information System

• Identify who needs to know.
• Determine what information they need.
• Develop a system whereby right people receive right information at right time in right way.

QM Information

1. Healthcare data must be carefully defined and systematically collected and analyzed.
2. Tremendous amounts of healthcare data and information are available.
3. Mature QI information revolves around clearly established patterns of care.
QM Information

4. Most quality indicators are useful only as indicators of potential problems, not as definitive measures of quality.
5. Multiple measures of quality need to be integrated.
6. Using outcomes information without monitoring the process of care is inefficient.
7. Cost and quality are inseparable.

Decision Support

• Helps in making comparison with competitors
• Identifies practitioners and providers who meet acceptable levels of quality
• Allows providers to respond rapidly to market changes
• Justifies pay for exceptional performance
• Used to develop outcomes information management plan
### Decision Support

- Analyzes and interprets outcomes data
  - **Chart-based system**
    - Medical records reviewed by analysts
    - Severity and risk-adjusted information identified

- **Code-based system**
  - Based on retrospective administrative data
  - Uses clinical information spanning entire stay
  - Has lower cost and larger sample size
  - Submission of payer data deemed public information required by states
Decision Support

- Identifies positive and negative outcomes
- Includes risk/severity adjustment data
- Facilitates cross-functional analyses
- Integrates clinical and financial data

Risk Adjustment

- Takes into account the fact that different patients with the same diagnosis might have additional characteristics or conditions that could affect outcomes
Risk Adjustment

- Some systems define differences between risk adjustment and severity.
  - Risk adjustment methodologies apply to binary (yes/no) data.
  - Severity adjustment methodologies are applied to cost or length-of-stay data.

Risk Adjustment

- Both raw and risk-adjusted data can be available for outcomes.
- Handling of outliers requires a consistent approach.
- The best system includes every patient, practitioner, and payer.
Benchmarking vs. Comparison

- Benchmarking identifies processes and results that represent best practices for similar activities inside or outside the healthcare industry and uses an ideal reference point.
- Comparison measures processes and results against a reference point either internally or externally with competitors and other organizations providing similar services.
- Both comparison and benchmarking results should be interpreted.

Benchmarking

- Involves asking the right questions
  - What is the best practice?
  - What are we doing? How are we doing it?
  - How well are we doing it? What are the measurement results?
  - Why are we looking for improvement?
- Is an essential part of clinical pathway development
Benchmarking

- Enables organization to set target or goal for process improvement (PI) activities
- Uses various data sources
  - Government
  - Large healthcare alliances
  - Peer review organizations
  - For-profit database companies

Evidence-Based Practice

- *Evidence-based medicine* is the conscientious, explicit, and judicious use of current best evidence in making patient care decisions.
- Evidence-based practice promotes patient safety through the provision of effective and efficient healthcare.
Interpret and Utilize Information

• Step 1. Planning and organizing
  - Anticipate barriers, identify responsibilities, lay groundwork for multidisciplinary collaboration.
  - Develop data dictionary.

• Step 2. Verifying and correcting
  - Identify data limitations.

• Step 3. Identifying and presenting findings
  - How do data compare with data from other organizations?
  - What is the trend over time?
  - How are data likely to be interpreted?
  - Is there an opportunity for improvement?
  - Who should receive the data?
  - For what purpose?
Interpret and Utilize Information

Step 4. Studying and developing recommendations
- Perform variation analysis.
- Review additional data.
- Conduct retrospective medical reviews.
- Perform process analysis.

Step 5. Taking action
- Empower teams to make decisions and implement changes based on information discovered by data analysis
- Educate and train staff.
- Report findings.
- Make necessary changes in policies and processes.
- Implement changes in practice patterns.
Interpret and Utilize Information

• Step 6. Monitoring performance
  - Have proposed changes actually been implemented?
  - How could compliance with changes be enhanced?
  - What effect are changes having on patient outcomes?
  - Should changes be modified and then tested further, tested longer, or ended?

Interpret and Utilize Information

• Step 7. Communicating results
  - Barriers to interpretation and utilization of information
    • Human
    • Statistical
    • Organizational
**Specific QI Reviews**

- Medication usage review
- Medical record review
- Peer review
- Patient advocacy (e.g., patient rights, ethics)
- Service-specific review (e.g., pathology, radiology, pharmacy, nursing)

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**Organizing Information** *(Committee Meetings)*

- Lay foundation with good background.
- Prepare productive agenda.
- Construct premeeting checklist.
- Run meeting correctly.
  - Make sure items are consistent with strategic plan.
  - Focus on helping day-to-day business.
  - Consider resources.
  - Consider ethical implications.
  - Allow time for follow-up and evaluation.
Data Help Leaders

• Assess progress toward mission and values
• Understand changes
• Develop a vision and evaluate program achievements
• Prioritize strategic goals
• Judge progress toward strategic goals

Data Help Leaders

• Weigh long-term and short-term financial viability
• Assess the impact of budgetary decisions
• Monitor aspects of organizational performance and take corrective action
• Understand mechanism for physician appointment and credentialing
Data Help Leaders

- Make individual credentialing recommendations
- Determine goals regarding community
- Evaluate effectiveness of programs
- Defend organization’s resources, efficiency, and effectiveness
- Help governing body evaluate and improve its performance

Information Systems

- Clinical information systems support direct care processes.
- Administrative support systems aid day-to-day operations in healthcare organizations
- Decision support systems deal with strategic planning functions.
### Implementation

- **Evaluating systems**
  - allow capture, storage, and retrieval of clinical and financial information from variety of sources
  - interface with existing systems
  - allow triggers or thresholds
  - send critical alerts (e.g., for abnormal values)
  - allow rules-based processing
  - are flexible.

- **Support accreditation requirements**
  - aid data mining reporting, statistical analysis
  - allow multiple users access
  - have an open operating system
  - have networking capabilities
  - display data graphically
  - provide for drill-down analysis
  - allow accessing of reports via website.
Buy or Build?

Factors to evaluate
- In-house expertise
- Data processing/QM staff
- Staff provision of documentation, training, support, and ongoing maintenance
- Plan to be implemented if staff member leaves

Buy or Build?

Factors to evaluate
- Expertise to build with broad picture in mind
- Resources available to keep updated
- Dedicated time of programmer or coordinator
- Benefits to joining vendor network
- Cost-benefit analysis
Data and Data Management

• Two types of data
  - Measurement or continuous
  - Count or categorical

• Different sampling method, data collection, and analysis for each type

Data and Data Management

• Count or categorical data
  - Nominal: count, discrete, qualitative, attributes
  - Binary: 2 possibilities (e.g., male/female)
  - Ordinal: categories rank-ordered
Nominal Data

<table>
<thead>
<tr>
<th>Nominal Variables</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgical Patients</td>
<td>Preoperative</td>
</tr>
<tr>
<td></td>
<td>Postoperative</td>
</tr>
<tr>
<td>Patient Education</td>
<td>Attended video</td>
</tr>
<tr>
<td></td>
<td>Didn’t attend video</td>
</tr>
</tbody>
</table>

Ordinal Data

<table>
<thead>
<tr>
<th>Ordinal Variables</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing staff rank</td>
<td>Nurse Level 1</td>
</tr>
<tr>
<td></td>
<td>Nurse Level II</td>
</tr>
<tr>
<td></td>
<td>Nurse Level III</td>
</tr>
<tr>
<td>Education</td>
<td>Associate Degree</td>
</tr>
<tr>
<td></td>
<td>BS</td>
</tr>
<tr>
<td></td>
<td>MS</td>
</tr>
<tr>
<td></td>
<td>PhD</td>
</tr>
</tbody>
</table>
Continuous Data

• Measured on scales that theoretically have no gaps, variables data
  - Interval data: distance between each point is equal
  - Ratio data: distance between each point is equal, but there is a true zero

Continuous Data

• Measurement or continuous data could be converted to count or categorical data.
• Critical issue is whether right data are measured or counted.
• Most QI data readily available are analyzed because they are easy to retrieve.
## Statistical Power

- Categorical data have the least statistical power.
- Continuous data have the most power and need fewer data points.

## Data Collection

- Constructing a data collection plan
  - Determine who, what, when, where, how, why.
  - Structure design.
  - Choose and develop sampling method.
  - Determine and conduct training.
  - Delegate responsibilities.
  - Facilitate coordination.
  - Forecast budget.
  - Conduct pilots.
Basic Sampling Designs

- Population \( (N) \): total aggregate or group
- Sample \( (n) \): a portion of the population

Sampling
- Provides a logical way of making statements about a larger group
- Allows quality professionals to make statements or generalize from the sample to the population

Basic Sampling Designs

- Probability sampling: Every element in the population has an equal or random chance of being selected.
- Nonprobability sampling: It is not possible to estimate the probability that every element has been included.
Basic Sampling Designs

• Probability sampling
  - Simple random sampling: Each individual in the sampling frame (population) has an equal chance of being chosen.
  - Systematic sampling: After random selection of first case, every nth element from a population is drawn.

• Stratified random sampling: Population is divided into strata; each member of strata has equal probability of being selected.

• Cluster sampling: Population is divided into groups or clusters to derive random sample.
Basic Sampling Designs

- Nonprobability sampling
  - Convenience sampling: Any available group of subjects is used (lack of randomization).
  - Snowball sampling: Subjects suggest other subjects (subtype of convenience sampling).

- Purposive or judgment sampling: Particular group is subjectively selected based on criteria.
  - Expert sampling: Experts in a given area are selected because of their access to relevant information.
  - Quota sampling: A judgment is made about the most representative sample.
Sample Size

- A larger sample yields a more valid and accurate study.
- A larger sample yields a smaller standard error of the mean.

Sample Size

- Regardless of shape of original population distribution, as sample size increases, shape of sampling distribution becomes normal.
- With a sample size of at least 30, sampling distribution appears almost normal; no perfect minimum sample size exists; power analysis determines appropriate sample size.
### Sample Size

- Calculating sample size depends on four variables: population size, estimate of population standard deviation, desired level of significance, and bounds of error estimate.

### Data Analysis

- Reporting
  - Report and analyze data regularly.
  - Validate accurate data collection.
  - Display data in easily understood format.
  - Provide a brief summary of data.
  - Analyze variances and identify unexpected patterns.
Data Analysis

• Context
  - Provide background.
  - Supply graphs and tables.
  - Report summarizing values.
  - Identify removed outliers.
  - Include time order.

Data Analysis

• Variation in process performance
  - Use SPC chart.
  - Analyze random and common-cause variation.
  - Look for special-cause variation.

• Trend identification
  - Initiate investigation to determine cause of trend.
Statistical Analysis and Interpretation

• Measurement tools

• Reliability: extent to which an instrument yields the same result on repeated trials
  - Reliability coefficient: stability of an instrument (>70)
    • Test/retest
    • Split-half
    • Reliability by equivalence
  - Interrater reliability: the likelihood that two raters will assign same rating

Statistical Analysis and Interpretation

• Validity
  - Content (face) validity: the degree to which the instrument adequately represents universe of content
  - Construct validity: the degree to which the instrument measures the theoretical construct or trait it is designed to measure
Statistical Analysis and Interpretation

• Validity
  - Criterion-related validity: the degree to which the score on instrument is related to a criterion
    • Concurrent validity: assessed when the criterion variable is obtained at the same time as the measurement
    • Predictive validity: assessed when the criterion measure is obtained at some future time

Statistical Techniques

• Measures of central tendency: describe the clustering of a set of scores or values of a distribution; central refers to middle, tendency refers to trend
  - Mean: average
    • Most commonly used measurement
    • Most sensitive to extreme scores
    • Used with interval, ratio, ordinal data with normal distribution
Mean Calculation

Example 1
- Apgar scores: 7, 8, 8, 9, 8
- Sum of values = 40; 40 divided by 5 = 8
- Mean = 8

Example 2
- Apgar scores: 7, 8, 8, 1, 8
- Sum of values = 32; 32 divided by 5 = 6.4
- Mean = 6.4

Example 3
- Infection rates: 0, 0, 0, 0, 1.5, 3.2, 4.3, 5.6
- Sum of values = 11.5; 11.5 divided by 8 = 1.44
- Mean = 1.44
Statistical Techniques

- Measures of central tendency
  - Median: measure that corresponds to the middle score; doesn’t take into account quantitative value of individual scores
  - To determine the median, arrange values in rank order; if number of values is odd, count up or down to middle value; if number of values is even, compute mean of two middle values.

Median Calculation

**Example 1**
- Values: 2, 2, 3, 4, 5, 6, 6, 8, 9
- 5 is the middle number
- Median = 5

**Example 2**
- Values: 2, 2, 2, 3, 4, 5, 6, 6, 8, 9
- Add 4 plus 5 (middle numbers) and divide by 2 = 4.5
- Median = 4.5
Median Calculation

Example 3

- Values: 2, 2, 2, 3, 4, 5, 6, 6, 8, 84
- Median = 4.5
- Median doesn’t take into account quantitative values of individual scores.

Statistical Techniques

- Measures of central tendency
  - Mode: score or value that occurs most frequently and is easiest to determine
    - Can be calculated quickly and easily, tends to be unstable
    - Describes typical values in nominal data
### Mode Calculation

**Example**

- Values: 30, 31, 31, 32, 33, 33, 33, 33, 33, 34, 35, 36
- Mode = 33

---

### Statistical Techniques

**Measures of Variability**

- Range: difference between highest and lowest score
  - Reported as values, not distance
  - Provides quick estimate of variability; is unstable
Range Calculation

Example

• Test scores range from 60 to 98.
• Range is 60-98, or 38.

Statistical Techniques

Measures of variability

• Standard deviation (SD)
  - Most frequently used statistic for measuring degree of variability
  - Standard: average spread of scores around the mean
  - Deviation: how much each score is scattered from the mean
Statistical Techniques

Measures of variability

- Standard deviation (SD)
  - The greater the spread of distribution, the greater the dispersion or variability from the mean.
  - The more values cluster around the mean, the smaller the variability or deviation.
  - All scores are taken into consideration.
  - SD is used with normally distributed interval or ratio data.
  - A normal distribution is a standard bell curve.

Bell Curve

- 68.3% of area
- 95.4% of area
- 99.8% of area

Q Solutions, 2nd edition. Figure 1-4
Statistical Techniques

Measures of variability

- Interpercentile measures
  - Interquartile range: extreme scores excluded, only middle cases used, measures lined up in order of size and divided into quarters (growth charts are a common example)
Parametric Tests

- \( t \) test: used to analyze difference between two means (scores)
  - When determining whether difference between two group means is significant, a distinction must be made between the two groups.

\[ t \] Test

Example: Test effects of an educational program

- Two-sample independent \( t \) test
  - 10 of 20 people are randomly assigned to experimental group and receive education on quality tools.
  - Remaining 10 = control group.
  - Attitudes toward using tool are evaluated.
- Paired sample \( t \) test
  - Train all 20.
  - Give pre- and posttest
  - Compare results.
Parametric Tests

- Regression analysis: based on statistical correlations, associations among variables
  - Simple linear regression, one variable ($x$) used to predict second variable ($y$) (e.g., weight used to predict height)
- Multiple regression analysis estimates effects of 2 or more independent variables ($x$) on dependent measure ($y$)

Nonparametric Tests

- Chi square: measures statistical significance of a difference in proportions
  - QI data is counted, not measured; test can’t calculate averages (e.g., of gender); can describe ratio of counts (e.g., 2 times as many men as women in clinic) or proportions (e.g., 50% male, 75% female)
  - Easiest statistical test to calculate manually
Example of Chi-Square

• 15 of 30 men (50%) and 10 of 40 women (25%) missed appointments.
• Referent rate (RR) 0.5 divided by 0.25 = 2. Men are twice as likely to miss appointments; could this have happened by chance?
• Null hypothesis is that men and women fail to show up for appointments at the same rate (RR = 1).
• Chi square indicates likelihood of noting a twofold difference in missed appointments.
• Chi-square value = 5.84, corresponds to significance (p) value of <.02 (fewer than 2 out of 100); 2% probability difference is due to chance.

Confidence Intervals

• Confidence interval (CI): provides a range of possible values around a sample estimate (best guess about true value)
  - It has been observed that men are twice as likely as women to miss appointments.
  - 95% CI around RR (referent rate) of 2 is 1.27–3.13; there is 95% certainty that men are between 1.27 and 3.13 times more likely to miss an appointment; 90% CI is 1.44–2.77.
Level of Significance

- *Level of significance* ($p$) gives the probability of observing a difference as large as the one found in the study when there is no true difference (when the null hypothesis is true).
- Historically, when $p$ values < .05, results are statistically significant.
- $p$ value for missed appointments = .02

PI Tools

- Decision-making tools
- Stratification chart
- How to construct
  - Examine process to identify biases.
  - Enter data on collection forms.
  - Look for patterns.
- Alternate tool: Is/is not matrix
PI Tools

- Decision-making tools (covered in *Using Data for Improvement: The Toolkit DVD*)
  - Histogram or bar chart
  - Pareto diagram
  - Scatter diagram or scatter plot
Histogram

- Frequency distribution tool for one value; plotting points shows center and spread of data; measurement on x axis; frequency on y axis
- 25 data points; rank smallest to largest; subtract smallest from largest
- Estimate number of bars (square root of data points)
- Divide range by number of bars for width
Pareto Diagram

- Displays series of bars with tallest bar representing the most frequently occurring issue
  - Identify independent categories and way to compare them.
  - Rank the order in descending categories.
  - Calculate percentage of total each category depicts.

Focus on 80% of the problem
Scatter Diagram or Scatter Plot

- Used to determine extent to which two variables relate to one another (correlation)
  - Collect 25 pairs of data for two variables.
  - Plot paired sets of data.

Positive Correlation \( r > 0 \)

No Correlation \( r = 0 \)

Negative Correlation \( r < 0 \)
**PI Tools**

- **Analysis**
  - Root cause analysis (RCA): a systematic process aimed at finding the basic problem (root cause) and taking action to correct the problem.
  - Failure mode and effects analysis (FMEA): a systematic method for reducing risk before an event happens.

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**PI Tools**

- **Decision-making tools**
  - Cause-and-effect, Ishikawa, or fishbone diagram
    - Used to analyze and display potential causes of problem (after the fact).
    - Used to identify potential causes to make something occur (before the fact).
    - Uses common categories.
Cause-and-Effect Diagram

- Cause-and-effect, Ishikawa, or fishbone diagram
  - Determine effect or label and place on far right.
  - Draw horizontal line to left.
  - Determine categories.
  - Draw diagonal line for half of categories above and half below line.
  - Organize each of causes on each bone.
  - Draw branch lines for relationships.
Root Cause Analysis

- Root cause must be identified when variation is inherent in process.
  - Identify potential causes.
  - Verify potential causes by collecting data.
  - Analyze data utilizing tools to determine actual causes or most probable causes.
  - Develop and implement action plan.

Factors to address in analysis

- Human factors: communication and information management systems
- Human factors: training
- Human factors: fatigue, scheduling
- Environment factors
- Equipment factors
- Rules, policies, procedures
- Leadership systems and culture
Data Analysis and PI

- Prioritization matrix
  - Select appropriate format.
  - Determine relationship symbols.
  - Create matrix and indicate relationships.

<table>
<thead>
<tr>
<th></th>
<th>Low Cost</th>
<th>High Strategic Priority</th>
<th>Meets Accred. Standards</th>
<th>MD Concern</th>
<th>Staff Concern</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repair roof</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>Purchase new X-ray machine</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>Develop skilled nursing</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Develop better communications with home health</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>Develop a staff newsletter</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>15</td>
</tr>
</tbody>
</table>
Data Analysis and PI

- Flowchart or process flowchart
  - Select process.
  - Determine beginning and end.
  - Place first step in an oval.
  - Place each of next steps in a rectangle.
  - If decision is made, describe it in a diamond.
  - Decision loop reenters process.
  - Place last step in an oval.
### Statistical Process Control

- **Control chart**
  - Types of control charts
- **Types of variation**
  - Common-cause variation: points between control limits in no particular pattern
  - Special-cause variation: points outside limits that exhibit special patterns

### Run or Trend Chart

- *Line graph* displays data points plotted over time.
- Use run chart with measurement/continuous data and with categorical data that are being examined over time.
- Data are kept in time order.
- Chart makes it possible to see flow of data from one point to the next.
Run Chart

• Help show flow of data
• Help answer such questions as
  - How much variation do we have?
  - Is the process changing significantly over time?
  - Has our change resulted in improvement?
  - Was the improvement held?
• Speak for themselves
Run Chart

- Analyze run charts using rules for determining statistically important events.
  - Rule 1: Six or more consecutive points either all above or all below the median
  - Rule 2: Five points all going up or all going down
  - Rule 3: Number of runs above and below the median
  - Rule 4: Data that are obviously different values
Balanced Scorecard

- Views organization from multiple perspectives
- Four perspectives of measurement
  - Financial
  - Customer
  - Internal business processes
  - Learning and growth
### Balanced Scorecard Example

<table>
<thead>
<tr>
<th>Strategic Goals</th>
<th>Strategic Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Be recognized as one of the top healthcare providers in the community.</td>
<td>• Hire skilled staff and set minimum nurse-to-patient ratios.</td>
</tr>
<tr>
<td>• Establish outreach program for management of chronic illness.</td>
<td>• Obtain communication technology.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strategic Goals</th>
<th>Strategic Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Develop state-of-the-art program for breast cancer detection and treatment.</td>
<td>• Provide incentives for physicians to train.</td>
</tr>
<tr>
<td>• Reduce patient costs by 15%.</td>
<td>• Control costs with computerized planning tools.</td>
</tr>
</tbody>
</table>
Question 1

Which part of a job description should be used in a criteria-based performance evaluation?

A. Salary grade
B. Duties and responsibilities*
C. Working conditions
D. Qualifications
Question 2

Which of the following monitors provides patient-outcome information?

A. Nosocomial infection rate*
B. Degree of compliance with nursing care documentation
C. Degree of compliance with renewal of antibiotics therapy
D. Equipment malfunction rate
Question 3
The following represents two samples of five hospitals’ hysterectomy rates per 1,000 women 40–60 years of age.

<table>
<thead>
<tr>
<th></th>
<th>Rates</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample A</td>
<td>3,5,7,8,5</td>
<td>5.6</td>
<td>1.8</td>
</tr>
<tr>
<td>Sample B</td>
<td>4,5,6,7,5</td>
<td>5.4</td>
<td>1.1</td>
</tr>
</tbody>
</table>

In analyzing this information, it can be concluded that

Question 3
A. Sample A has more variability than Sample B.*
B. Sample A’s performance is superior to Sample B’s.
C. There are more cases in Sample B.
D. There is a data collection error in Sample B.
**Question 4**

The primary benefit of adopting a countrywide or global uniform set of discharge data is to

**Question 4: Answers**

A. Facilitate computerization of data.
B. Validate data being collected from other sources.
C. Facilitate collection of comparable health information.*
D. Assist medical records personnel in collecting internal data.
Question 5

A surgeon’s wound infection rate is 32%. Further examination of which of the following data will provide the most useful information in determining the cause of this surgeon’s infection rate?

A. Mortality rate  
B. Facility infection rate  
C. Use of prophylactic antibiotics*  
D. Type of anesthesia used
Using Data for Improvement:
The Toolkit
2-disc DVD set by Sandra Murray
available through NAHQ

Section 3
Strategy and Leadership
## Objectives

- To identify key concepts in strategic planning
- frameworks for healthcare systems
- alignment of culture to support quality
- PI teams
- risk management, utilization management, and case management
- education and training

## Frameworks

- Avedis Donabedian: founder of quality assurance, a theoretical framework for evaluation of patient care
  - Structures
  - Processes
  - Outcomes
Excellence and Quality Models

• Evaluate quality models.
• Provide education to staff regarding quality model components and criteria.
• Assess applicability of model.
• Determine whether to change quality model based on assessment.

Frameworks

• Baldrige National Healthcare Criteria
• Department of Commerce initiative to improve organizational excellence of nation’s businesses and organizations.
• Baldrige Award honors organizations demonstrating a commitment to quality excellence
Baldrige Criteria for Performance Excellence

Organizational Profile: Environment, Relationships, and Challenges

Leadership

Strategic Planning

Workforce Focus

Focus on Patients, Other Customers, and Markets

Results

Process Management

Measurement, Analysis, and Knowledge Management

External Quality Awards

• Evaluate applicability of external quality award.
• Review quality award components and criteria.
• Assign teams to conduct assessments.
• Assess organization’s processes according to quality award criteria.
• Determine whether to apply for quality award based on assessment.
Strategic Planning

- Strategy
  - The plans and activities developed by an organization in pursuit of the goals and objectives

“Without a strategy the organization is like a ship without a rudder, going around in circles.”
—J. Ross and M. Kami

Strategic Planning

- Goals of strategic management
  - Create a framework for operations.
  - Create fit with external environment.
  - Establish process for coping with change and renewal.
  - Foster anticipation, innovation, and excellence.
  - Facilitate consistent decision making.
  - Create organizational focus.
Strategic Management Process

• Mission (purpose): why, whom, what
  - SSM Health Care
    *Through our exceptional healthcare services, we reveal the healing presence of God.*
  - Department of Veterans Affairs
    *Honor America’s veterans by providing exceptional health care that improves their health and well being.*

Strategic Management Process

• Vision: future of organization
  - Department of Veterans Affairs
    *VHA will continue to be the benchmark of excellence and value in health care and benefits by providing exemplary services that are both patient centered and evidence based.*
    *This care will be delivered by engaged, collaborative teams in an integrated environment that supports learning, discovery, and continuous improvement.*
Strategic Management Process

• Vision: future of organization
  - Department of Veterans Affairs
    *It will emphasize prevention and population health and contribute to the nation’s well-being through education, research and service in National emergencies.*

• Organization’s direction: built on mission and guided by vision

Strategic Management Process

• Guiding principles: help direct vision

• Core value: customer focus
  - Key is knowing and understanding customer needs and expectations.

• VA Core Values
  - I CARE: Integrity, Commitment, Advocacy, Respect, Excellence
Baldrige Core Values

- Visionary leadership
- Customer-driven excellence
- Organizational and personal learning
- Valuing of employees and partners
- Agility
- Focus on future
- Management for innovation
- Management by fact
- Public responsibility and citizenship
- Focus on results and creating value
- Systems perspective

Strategic Management Process

- Assessment of what the organization wants to do
- Goals and objectives guide actions, serve as yardstick for measuring progress.
- Goals must be
  - observable
  - measurable
  - challenging but attainable
  - controllable
  - visible
  - time-limited.
VA Goals

- Become the national benchmark for quality, safety, and transparency of healthcare, particularly in those health issues associated with military service.
- Provide timely and appropriate access to health care and eliminate service disparities.
- Transform VHA’s culture through patient-centered care to continuously improve veteran and family satisfaction.
- Ensure an engaged, collaborative and high-performing workforce to meet the needs of veterans and their families.

Strategic Management Process

- Objectives should
  - be action-oriented statements, written precisely
  - be short and simple
  - state specific activities and results or outcome
  - specify actions to be taken, conditions and criteria for completion
  - be prioritized.
Strategic Management Process

- Assessment of the external environment (what the organization should do)
  - Overall environment
  - Immediate environment

Strategic Management Process

- Assessment of the internal environment (what the organization can do)
  - Tangible: human, financial, physical
  - Intangible: reputation
### Strategic Management Process

- **Strategy formulation:** gap analysis
- **Strategy implementation**
  - Integration of TQM/QI with strategic planning
    - Hoshin planning: one approach

### Strategic Management Process

**Hoshin planning**

- Component of TQM system used to ensure that vision → objectives and actions → accomplish long-term strategic goals
- **Three levels**
  - General (senior management)
  - Intermediate (middle management)
  - Detailed (implementation teams)
Strategic Management Process

• Measure and control
  - Management evaluates accomplishment of goals.
  - Actual performance is evaluated and compared to performance goals and objectives.
  - Gaps require action.

Leadership:
Translating Strategic Goals into Quality Outcomes

• The board bears ultimate responsibility for TQM/QI.
  - Organization
  - Public policy and external relationships
  - Strategic planning
  - Resource management
  - Human resource development
  - Education and research
  - Quality
**Leadership:**
Translating Strategic Goals into Quality Outcomes

- Distinction between leadership and management
  - Leaders develop vision and align subsystems.
  - Managers perform functions to keep organization on path.
- Both strong leadership and strong management necessary
- “Selling” the vision to the organization

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**Leadership:**
Translating Strategic Goals into Quality Outcomes

- Leadership framework
- Principles of excellent leaders
  - Inspire shared vision.
  - Challenge the system.
  - Enable others to act.
  - Model the way.
  - Encourage the heart.
Culture Supports Quality

• Culture: shared values and behavioral norms

• Strong culture
  • Provides sense of identity
  • Enhances cooperation
  • Creates system of informal rules
  • Creates distinctions between organizations, allowing competitive edge

Culture Supports Quality

• Elements of culture
  - Values and norms
  - Symbols
  - Language
  - Rituals and ceremonies
  - Stories, legends, and myths
  - Heroes
Culture Supports Quality

- Assessing culture related to quality
  - Involvement of leader
  - Allocation of resources
  - Reward of QI behaviors
  - Active involvement in QI activities
  - Time spent on QI activities and discussion
  - Prevailing QI attitude

Culture Supports Quality

- Strengthening culture for QI
  - Leaders
    - make QI everyone’s responsibility
    - have annual budget for QI
    - make QI part of strategic planning
    - reward QI behaviors.
### Culture Supports Quality

- Attention to visible culture elements
  - Old negative stories replaced
  - Symbols and rituals supporting QI created
  - QI successes celebrated
  - Persistent leadership shown

### Structure Supports Quality

- Organizational structure: identifies parts and links together
- Basic structural elements
  - Focus on processes
  - Recognition of internal customers
  - Reduction of hierarchy
  - Creation of a team-based organization
  - Use of steering committees
  - Development of agile organization
Process: Risk Management

• Risk management (RM): an organized effort to identify, assess, and reduce risks to patients, visitors, staff, and organizational assets.
  - Initially was organizational reaction to increasing litigation
  - Now has more proactive role

Process: Risk Management

• Clinical risk management
  - Regulatory compliance, safety management, credentialing, client-provider relations, publicity and media coverage, patient care
  - RM and QM/QI closely related
### Process: Risk Management

- **Basic risk management functions**
  - Maintenance and monitoring
  - Claims management
  - Clinical and administrative responsibilities
  - Collaboration with safety officer
  - Collaboration with finance staff
  - Regulatory compliance

### Process: Risk Management

- **Process of risk management**
  - Identify exposure.
  - Examine techniques to reduce exposure.
  - Select best technique.
  - Implement technique.
  - Monitor effectiveness.
Process: Risk Management

- Risk management plan
- Education and skills for risk managers: clinical, legal, insurance

Utilization Management

- Utilization management (UM): organized, comprehensive approach to analyzing, directing, and conserving organizational resources
- Response to changing needs of consumers
- UM goal: to facilitate delivery of high-quality, low-cost, efficient, and effective care to all patients
Legislation (2013)

- Title XVIII Social Security Act 1965
  - Established Medicare Program
- Title XIX Social Security Act 1965
  - Medicaid Program
- Amendment to Social Security Act 1972
  - Established professional standards review organizations
- Federal HMO Act 1973
- Omnibus Budget Reconciliation Act 1981 Diagnostic Related Groups (DRGs)

Legislation (2013)

- Tax Equity & Fiscal Responsibility Act 1982
  - Prospective payment based on DRGs
  - Incentives to increase discharges, decrease length of stay and ancillary services; shift care; HMOs
- Peer Review Improvement Act 1982
  - Peer Review Organizations
- Social Security Amendment 1983
  - Prospective payment system based on DRGs
Legislation (2013)

- Consolidated Omnibus Reconciliation Act 1985
  - Payment denial substandard care
- Medicare Conditions of Participation 1986
- Patient Self Determination Act 1990 (advance directives)
- Safe Medical Devices Act 1990
- Americans with Disabilities Act 1990

Legislation (2013)

- Occupational Safety & Health Administration 1991: bloodborne pathogens
- OSHA 1993: prevention TB transmission
- Healthcare Research & Quality Act 1999
- Needlestick Safety & Prevention Act 2000
- Medicare Prescription Drug Improvement & Modernization Act 2003
Legislation (2013)

- Patient Safety & Quality Improvement Act 2005
- Safety of Seniors Act 2007 (reduce falls)
- Affordable Care Act 2010
- Public demand for more efficient use of resources while providing access created healthcare reform movement

Utilization Management

- Medical necessity appropriateness review
- Using targets (Interqual’s Severity of Illness/Intensity of Service)
- Approved by medical staff and governing body
- Review each patient encounter against criteria
Utilization Management

- Discharge planning and monitoring
- Move patient through healthcare system appropriately
- Provide patient with appropriate level of service delivery each point in continuum of care timely
- Monitor and facilitate process

Utilization Management

- Overutilization and underutilization surveillance
- Fundamental to every utilization management program
- Review cases for appropriate use of resources and evaluate impact on quality outcomes
Utilization Management

• Quality of care and liability problems
• During review, quality of care and risk/liability issues should
  - be identified
  - be reported
  - have timely follow-up.

Utilization Management

• Financial issues
• Obtain concurrent as well as clinical data on all applicable cases
• Data educates provides regarding cost of treating patients
• Provides governing body with
  - case mix and cost data
  - length of stay
  - complications
  - mortality.
## Utilization Management

- Medical and organization staff education
- Provide education on resource management
- Leadership/governing body reporting
- Plan consistent with strategic plan
- Reports incorporated into quality dashboards for governing body

## Utilization Management

- Program design
  - Formal committee
  - Physician and organizational representatives
  - (finance, nursing, administration, social services, discharge planning, ancillary staff)
- Physician advisers
  - Providing critical peer review
  - Liaison for medical staff and UM
  - Resolve issues
Process: Case Management

• Case management models
  - Reimbursement-based model
  - Institution-based model
  - Social services
  - Private management-based model
  - Insurer-based model
  - Life-care planners

• Importance of case management: critical to the continuum of care, patient satisfaction, and efficient use of resources

Process: Case Management

• Case management process
  - Intake and assessment
  - Development of comprehensive plan
  - Discharge planning
  - Monitoring of outcomes for effectiveness of care
**Process: Case Management**

- Discharge planning
  - Care coordination among various case managers
  - Involvement of ancillary services
  - Expected discharge date
  - Goals to be met before discharge
  - Specific instructions
  - Specifics regarding follow-up plans

**TQM/QI Structural Elements**

- Recognition of internal customers
  - Every process has internal and external customers.
  - Employee is customer when he or she receives material, information, or services from others in organization.
  - Internal customers may also be suppliers of goods to external customers.
TQM/QI Structural Elements

• Internal customer approach
  - Remind departments without direct external customer contact of critical link to customer satisfaction.
  - Improve relationships.
  - Make work process flow smoothly.
  - Avert potential bottlenecks.

TQM/QI Structural Elements

• Reduction in hierarchy (flattening of organizations)
  - requires decentralized decision making, shared governance
  - is affected by leadership style
    • Autocratic
    • Participative
    • Empowering
### Empowerment

- Deming: Improvements in quality are more likely to be realized when workers are empowered.
- Empowerment allows employees to
  - take ownership of jobs
  - make decisions concerning their area
  - take responsibility for decisions
  - add value to jobs.

### Teams

- Creating a team-based organization
- Team: a group of people who are interdependent with respect to information, resources, and skills, and who seek to combine their efforts to achieve a common goal
Teams

• Types of QI teams
  - Steering committee or council
  - Process (or performance) improvement teams

• QI council responsibilities
  - Set priorities.
  - Lend legitimacy to QI effort.
  - Maintain focus on identified goals.
  - Foster teamwork.
  - Provide resources.
  - Formulate QI policies.
Teams

- PI teams
  - Natural work teams
  - Cross-functional or intact
  - Temporary or permanent

- Use of teams dependent on
  - Task complexity
  - Task interdependence
  - Task objectives

Team charter
- Description of process: why and who
- Development of criteria
- Timeline for meetings
- Resources available
- Structure of leadership
- Expected communication of progress and results
Teams

- How do teams develop?
  - Stage 1: Forming
  - Stage 2: Storming
  - Stage 3: Norming
  - Stage 4: Performing

Teams

- Characteristics of effective teams
  - Competent members with skills
  - Commitment to clear common goals
  - Standards of excellence
  - Contributions from all
  - Collaborative environment
  - Leadership support
### Teams

- How should teams be evaluated?
  - Productivity: progress or success in meeting team and organizational goals
  - Satisfaction of team members
  - Individual growth

### Team Roles

- Team leader
  - guides team to achieve successful outcomes and reach established goals
  - specific responsibility for guiding team through meeting process to achieve objective
  - involved in meeting content and process
  - provides direction and support for the team
Team Roles

• Team facilitator
  - promotes effective group dynamics within the team
  - concerned with how decisions are made
  - is not a member of the team
  - serves as a coach or consultant for team
  - has specific responsibility for focusing on meeting and improvement process
  - turns light on; keeps team on track
  - expertise regarding use of tools

Team Roles

• Team member
  - shares knowledge and expertise of process or issue addressed by team
  - responsible for both content and process of team meetings
  - shares responsibility for focusing on objective, contributing information, analyzing data, staying on track, making decisions, managing time, continually improving team
**Staff Supports Quality**

- Methods for determining education and training needs
  - Evaluating knowledge and skills in job description
  - Asking participants
  - Asking participants’ supervisors
  - Asking others knowledgeable about job
  - Testing participants
  - Analyzing past performance appraisals

**Staff Supports Quality**

- Fundamentals of TQM/QI curriculum
  - Explanation of need for organizational improvement
  - Development of quality language
  - Discussion of quality goals
  - Definition of structure for TQM/QI
  - Articulation of TQM/QI philosophy
  - Description of process for TQM/QI
  - Description of responsibilities
  - Tools and techniques for teams
  - Description of change process
Education and Training Issues

• Top management sequence
  - Quality as strategic advantage
  - Role of leadership in sustaining quality vision
  - Integration of quality values
  - Indicators for measuring and evaluating
  - Components of QM implementation process
  - Basic QI tools
  - Role as team leaders
  - Awareness of accreditation standards

• Middle management sequence
  - Quality management
  - Customer service
  - Management of process performance
  - Measurement of quality outcomes
  - Management practices
Education and Training Issues

- Staff sequence
  - Quality awareness
  - Quality participation
  - Organization’s mission, vision, QI plan
  - Concepts of QM
  - Promotion of cooperation
  - Communication skills
  - Customer service
  - Relevant standards

Evaluating Training Results

- Reasons for evaluating results of training
  - To improve future training
  - To determine whether participants’ and organization’s needs were met
  - To determine whether current training should be continued

- Levels of evaluation: reaction, learning, behavior changes, results
Consultants

- Advantages of using consultants
- Disadvantages of using consultants
- Monitoring of consultants’ activities
- Consultant contracts
- Consultant evaluation

Contracts

- Quality management elements of contracts
  - Identify all contracted services.
  - Evaluate
    - accreditation requirements
    - data submission
    - evaluation.
PI in Performance Appraisal

- Work motivation: psychological forces that determine direction of a person’s behavior, level of effort, and level of persistence
- Skills to perform well
- Coach employees
- Outcomes
- Policies about performance to be rewarded

PI in Performance Appraisal

- Setting up a reward system
  - Determine priorities, values, and behaviors.
  - Identify criteria for recognition.
  - Establish a budget.
  - Determine accountability for recognition.
  - Develop procedures.
  - Obtain feedback.
  - Modify program based on feedback.
  - Give rewards based on the program.
Financial Systems Support Quality

• Capital budgeting
  - Large initial cash outflows
  - Annual activity
  - Trigger: capital request presented to senior management and expenditures committee and prioritized

• Cost-benefit analysis: performed for capital expenditures requests to determine viability and benefits; helps utilize financial and human resources

• QI projects should
  - be carried out only if benefits exceed costs over life of project
  - include time frame demonstrating costs and benefits over time.
Financial Systems Support Quality

• Establishing a business case for quality-related expenditures
  - Return on investment
  - Reduced expenditures or cost avoidance
  - Costs

Organizational Renewal

• Learning organizations are adept at
  • experimenting with new approaches
  • learning from own experience
  • learning from past experiences and best practices of others
  • transferring knowledge quickly
  • solving problems systematically.
Question 1

Which of the following processes is most cost-effective in preventing unnecessary resource consumption in the hospital?

A. Effective preadmission screening*
B. Accurate DRG assignment at admission
C. Second opinions for all surgeries
D. Preadmission insurance benefit denials
Question 2

A social service department regularly monitors the number of inappropriate referrals, the timeliness of discharge planning, and the number of days of discharge delays.

What additional monitor should be added to evaluate the appropriateness of social service interventions?

Question 2

A. Inadequacy of documentation in progress notes
B. Attainment of social service goals*
C. Timeliness of referrals to social services
D. Number of social service referrals from nursing
Question 3

A patient was in the operating room when a piece of a surgical instrument broke off and was left in the patient’s body. The patient was readmitted for removal of the foreign object.

Which of the following would most likely apply in this situation?

A. Res ipsa loquitur*
B. Contributory negligence
C. Contractual liability
D. Tort liability
### Question 4

Which of the following is most likely to be a benefit of concurrent review of ambulatory surgical cases?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>A</td>
<td>Decreased medical record review at discharge*</td>
</tr>
<tr>
<td>B</td>
<td>An increase in the number of cases failing screening criteria</td>
</tr>
<tr>
<td>C</td>
<td>An increase in reviewer competence</td>
</tr>
<tr>
<td>D</td>
<td>Decreased employee turnover</td>
</tr>
</tbody>
</table>

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*Note: The asterisk indicates the correct answer.*
Section 4: Continuous Readiness

Objectives

- To identify key concepts in
  - accreditation processes
  - survey preparation training
Continuous Readiness

• Context of continuous readiness
  - Past survey experiences
    • Ramp-up activities
    • Meetings, new work, copy and production costs
    • Relief after survey
    • Difficulty getting leadership attention
    • Unplanned surveys
    • Crisis-management mode

• Context of continuous readiness
  - Now: culture of continuous readiness (company or corporate attitude and value demonstrated throughout the organization)
    • Unknown survey dates
    • Immediate readiness to demonstrate compliance required
    • Mental preparedness
Continuous Readiness

- Surveys requiring continuous readiness
  - Corporate surveys
  - Payer surveys
  - Surveys by regulatory agencies
  - Accreditation surveys

2013

- Centers for Medicare & Medicaid Services (CMS; www.cms.gov)
  - Largest health insurer/payer in United States
  - Administers Medicare
  - Works with states to administer Medicaid and State Children’s Health Insurance Program
  - Social insurance program financed by payroll taxes, premium payments, general revenues
  - Works to improve outcomes of care
<table>
<thead>
<tr>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Individual State Departments of Health Services</td>
</tr>
<tr>
<td>- Licensing and certification programs</td>
</tr>
<tr>
<td>- Required quality improvement activities</td>
</tr>
<tr>
<td>• Federal Certification Requirements</td>
</tr>
<tr>
<td>- Clinical Laboratory Improvement Amendments (CLIA)</td>
</tr>
<tr>
<td>• Accreditation provides external seal of approval</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>• National Committee for Quality Assurance (<a href="http://www.ncqa.org">www.ncqa.org</a>)</td>
</tr>
<tr>
<td>- Evaluates quality of care and services provided by healthcare organizations</td>
</tr>
<tr>
<td>• Healthcare Effectiveness and Data Information Set (HEDIS)</td>
</tr>
<tr>
<td>- Accredits managed care organizations, managed behavioral healthcare organizations, preferred provider organizations, disease management, new health plans</td>
</tr>
</tbody>
</table>
2013

- The Joint Commission (www.jointcommission.org)
  - Improves safety of care using accreditation and certification as risk reduction activities
  - Accredits hospitals, healthcare networks, home healthcare, nursing homes, long-term care facilities, behavioral health, assisted living, ambulatory care, clinical laboratories, disease-specific care

2013

- Utilization Review Accreditation Commission (www.urac.org)
- URAC, American Accreditation Healthcare Commission
- Accreditation programs: case management, claims processing, consumer-directed health, core accreditation, credentials verification organization, disease management, health call center, health network, health plan, health provider credentialing, health utilization management, HIPAA privacy, HIPAA security, workers’ compensation utilization management
<table>
<thead>
<tr>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Healthcare Facilities Accreditation Program (<a href="http://www.osteopathic.org">www.osteopathic.org</a>)</td>
</tr>
<tr>
<td>• American Osteopathic Association’s HFAP accredits acute care hospitals, hospital laboratories, ambulatory care/surgery, mental health, substance abuse, physical rehabilitation medicine facilities</td>
</tr>
<tr>
<td>• Commission on Accreditation of Rehabilitation Facilities (<a href="http://www.carf.org">www.carf.org</a>)</td>
</tr>
<tr>
<td>• Promote quality, value, and optimal outcomes of services through consultative accreditation</td>
</tr>
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<thead>
<tr>
<th>2013</th>
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</thead>
<tbody>
<tr>
<td>• College of American Pathologists (<a href="http://www.cap.org">www.cap.org</a>)</td>
</tr>
<tr>
<td>- General laboratory accreditation, specialty programs for reproductive laboratories and forensic urine drug-testing programs</td>
</tr>
<tr>
<td>• Commission of Office Laboratory Accreditation (<a href="http://www.cola.org">www.cola.org</a>)</td>
</tr>
<tr>
<td>- Private alternative to help laboratories stay in compliance with CLIA</td>
</tr>
<tr>
<td>- Accredits physician office laboratories in compliance with CLIA, hospitals, and independent laboratories</td>
</tr>
</tbody>
</table>
2013

- DNV (Det Norske Veritas) independent foundation (www.dnv.com and www.dnvusa.com)
  - Purpose to safeguard life, property, and the environment
  - Established in Norway in 1864 to inspect and evaluate the technical condition of Norwegian merchant vessels
  - Hospital accreditation program approved by CMS
  - Annual deemed status surveys and quality improvement

Continuous Readiness

- Accreditation cycle
  - Application submitted
  - Application reviewed
  - Inspection team assigned
  - Date determined
  - Documents possibly requested in advance
  - On-site review conducted
  - Length of site visit determined by organization’s size and complexity
Continuous Readiness

- Accreditation cycle following visit
  - Summation conference and report of findings
  - Deficiencies or requirements for improvement
  - Action plan submitted
  - Notification of accreditation status
  - Periodic self-assessment or performance review
  - Fees

Continuous Readiness

- Changing organizational culture to one of readiness
  - Culture: system of beliefs and actions, norms of behavior and shared values
  - People often unaware of organization culture
  - Modifying organizational culture key to success
  - Cultural change tied to individual change
  - Slow, hard work
Leading Readiness Change

- Leadership defines vision
- Successful transformation depends on successful leadership.
- Successful leaders
  - Enable others to lead
  - Foster a sense of community
  - Create consistent system of rewards.
- Significant change 18–24 months
- Anchoring change in culture 10 years

Leading Readiness Change

- Top-management commitment to the hard work of altering corporate culture
- Common errors
  - Allowing too much complacency
  - Failing to create sufficiently powerful guiding coalition
  - Underestimating power of vision
  - Undercommunicating vision
  - Permitting obstacles to block new vision
  - Failing to create short-term wins
  - Declaring victory too soon
  - Neglecting to anchor changes firmly in corporate culture
## Continuous Readiness

- Continuous readiness programs
  - Previous survey preparation used a just-in-time model requiring ramp-up activities.
  - Goal of continuous readiness is to break crisis-management cycles and just-in-time cultures.

## Key Components

- Leadership commitment
  - Must be in place
  - Must be willing to change culture and commit to personal change
  - Must understand business case for compliance
  - Must include continuous readiness within strategic priorities.
**Key Components**

- Manager accountability
  - Evaluation of compliance evaluated
  - Operational oversight
  - Education of new managers

---

**Continuous Readiness Program**

- Critical step: routine self-assessment
- Annual assessment
  - Resources dedicated
  - Corrective action plans developed and monitored
Continuous Readiness Program

• Ongoing assessment
  - Thorough assessment made over calendar year
  - Responsibilities assigned
  - Assessment components presented to leadership
  - Monitoring schedules developed
  - Focused project management required

Continuous Readiness Program

• Corrective action plans
  - Organize improvements needed
  - Provide written response to survey or gap analysis
  - Require oversight during implementation, evaluation, and revision
Continuous Readiness Program

• New standard oversight
  - Define the process.
  - Understand the frequency with which changes are made and the feedback and notification process.
  - Begin to implement the changes as soon as possible.
    • Do not wait to begin the implementation until the date that the new or revised standard becomes effective.
    • Be ready to be surveyed soon after the effective date of the standard.

Continuous Readiness Program

• Staff education
  - Solid programs with participation from all levels
  - Effective, creative, targeted education plan
  - Cohesive program designed around survey cycles and actual survey process
Survey Preparation

• Staff recognition and rewards
  - contribute to success
  - are seen as important in culture of readiness
  - encourage participation
  - can be simple and still effective
  - can involve leadership acknowledgment.

Survey Preparation

• Processes
  - Role of QI professional
  - Survey initiation
    • Application, submission requirements
  - Survey coordination
    • Formation of multidisciplinary team
    • Frequency of meetings depends on ongoing self-assessments and available resources
  - Command center: central point of contact for surveyors
Survey Preparation

- Education
  - Review standards
  - Conduct orientation and practice sessions
- Space planning for survey
  - Reserve rooms
  - Consider hosting needs
- After the survey
  - Debrief and evaluate survey process
  - Postsurvey activities
- Plans for unannounced visits or surveys

Question 1

In order to perform a task for which one is held accountable, there must be an equal balance between responsibility and
Question 1
A. Authority*
B. Education
C. Delegation
D. Specialization

Question 2
The primary purpose of an emergency preparedness program is to
Question 2
A. conduct evaluations of emergency training.
B. provide evaluations of semiannual evacuation drills.
C. prevent internal disasters that disrupt the facility’s ability to provide care and treatment.
D. manage the consequences of disasters that disrupt the facility’s ability to provide care.*

Question 3
The separate services of Pharmacy and Nursing are having difficulty developing an action plan for medication errors. Pharmacy Services states that Nursing Services causes the majority of the problems related to errors, while Nursing Services states the opposite.

The quality professional’s role in resolving this problem is to do what?
Question 3

A. Provide them with directives on how to solve the problem
B. Facilitate discussion between the groups to enable them to assume ownership of their portions of the problem*
C. Assign the task to an uninvolved manager
D. Refer the problem to the facility-wide quality council

Section Four
Change Management and Innovation
Objectives

• To identify key concepts in
  - priorities for change
  - forces for change
  - models for creating change
  - techniques for facilitating change
  - models for performance improvement
  - failure mode and effects analysis

Change

“It is not the strongest of the species that survive, nor the most intelligent, but the ones most responsive to change.”

—Charles Darwin
21st-Century Healthcare System

- Healthcare at a minimum should be
  - safe
  - effective
  - patient-centered
  - timely
  - efficient
  - equitable.

IOM Priorities for Change

- *To Err is Human: Building a Safer Health System* (2000)
- *Crossing the Quality Chasm: A New Health System for the 21st Century* (2001)
- Healthcare frequently harms and routinely fails to deliver potential benefits.
- Care is not provided using best scientific knowledge.
### IOM Priorities for Change

- Agenda for changing healthcare delivery system
  - Commit to national statement of purpose for healthcare system.
  - Adopt new set of principles.
  - Identify priorities.
  - Implement more effective support processes.
  - Create supportive environment.

### Transparency: Public Reporting

- CMS and private groups: compare healthcare providers to national benchmarks and provide rating
- National Quality Forum: endorses consensus-based standards
Transparency: Public Reporting

- Data release to public began in mid-1980s.
- In 1990s New York State released mortality data.
- National initiatives were instituted to
  - Share data and information on prices and quality
  - Encourage standards in health information technology
  - Emphasize outcome and process measures.

Rewarding for Quality

- Rewarding organizations and providers through pay-for-performance (P4P)
- Leapfrog: rewards based on 4 elements
  - Proven methods to ensure patient safety
  - Improved clinical information systems
  - Routine use of modern QI methods
  - Routine participation of consumers
<table>
<thead>
<tr>
<th>Change Management</th>
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</thead>
<tbody>
<tr>
<td>• Change is inevitable and essential for growth.</td>
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<tr>
<td>• Different strategies required for each level of change, depending on</td>
</tr>
<tr>
<td>- type of change</td>
</tr>
<tr>
<td>- people involved</td>
</tr>
<tr>
<td>- magnitude of behavior to be modified.</td>
</tr>
<tr>
<td>• Managing change is a key skill.</td>
</tr>
<tr>
<td>• An organization’s ability to change is dependent upon individuals, including leaders.</td>
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</tbody>
</table>

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<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>• Healthcare is a complex system.</td>
</tr>
<tr>
<td>- Intense competition for limited resources</td>
</tr>
<tr>
<td>- Critical factors</td>
</tr>
<tr>
<td>• Limits to human performance in ability to respond to change</td>
</tr>
<tr>
<td>• Systems’ actual capacity to handle change</td>
</tr>
</tbody>
</table>
Change Management

- Change: moving people from existing state through transition to future state
- Resiliency of individuals: critical element
- Resilience: the process of adapting well in the face of adversity or significant stress
- Role of leaders: to establish the culture of change, role model flexibility, and behaviors needed to adapt to change

Change Management

- First-order change: small, requires minimal effort
- Second-order change: complex, requires significant change in behavior
- Change linked with how people view work
- Significant change: possible cause of distress
Change Management

• Change seen positively is valued.

“All changes do not necessarily lead to improvement, but all improvement requires change.”

—Institute for Healthcare Improvement

• Change is likely to cause disruption.
• No single model or tool will fit every situation.

Building and Sustaining Resilience

• Make connections.
• Avoid seeing crises as insurmountable problems.
• Accept that change is part of living.
• Move toward goals.
• Take decisive actions.
Building and Sustaining Resilience

• Look for opportunities for self-discovery.
• Nurture a positive self-view.
• Keep things in perspective.
• Maintain a helpful outlook.
• Take care of self.

Lewin’s Change Model

• Motivation and readiness must come before change is accepted.
• For change to occur, driving forces must be stronger than restraining forces.
• More impact may be achieved by removing restraining forces than by adding more driving force.
**Force Field Analysis Example**

- Proposed change is to allow families 24-hour visiting hours for patients in the ICU.

<table>
<thead>
<tr>
<th>Driving Forces</th>
<th>Restraining Forces</th>
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</thead>
<tbody>
<tr>
<td>• Families provide comfort and reassurance to patients during ICU stays.</td>
<td>• Medical director and nursing staff find the open visiting policy disruptive to patient care routines.</td>
</tr>
<tr>
<td>• Long periods without family support may increase stress.</td>
<td>• The open visiting hours will tire patients and not allow sufficient rest.</td>
</tr>
<tr>
<td>• Patients have a right to have family present during illness.</td>
<td>• More families will stay overnight and crowd waiting rooms.</td>
</tr>
<tr>
<td>• Families have variable work schedules and cannot always meet the hospital’s schedule.</td>
<td>• Longer visiting hours pose increased security risks for the hospital.</td>
</tr>
</tbody>
</table>

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**Change Management**

- Assessing readiness for change
  - First step of assessment is critical.
  - Point of change is to make an improvement.
  - Change concepts must be understood.
Change Concepts

- Eliminate waste.
- Improve work flow.
- Optimize inventory.
- Change the work environment.
- Enhance producer-customer interface.
- Manage time.
- Manage variation.
- Design error-proof systems.
- Focus on product or service.
Models of Change

- Traditional Plan-Do-Check-Act (PDCA) Model
- Plan-Do-Study-Act (PDSA) Cycles of Change

PDSA Model

- Setting Aims
- Establishing Measures
- Selecting Changes
- Testing Changes
PDSA Cycles of Change
• Plan for multiple cycles of improvement.
• Scale scope and size of test.
• Choose people who want to work.
• Capitalize on existing resources.
• Select easy, visible wins.
• Don’t delay for technology.
• Collect useful, meaningful measures.
• Test change under different conditions.
• Be prepared to stop if no improvement is seen.

QI Study Design and Analysis
• Getting started on quality improvement projects
  - Ensure leadership support and commitment.
  - Assess priority and feasibility of initiatives.
  - Identify aim of initiative.
  - Convene interdisciplinary team.
  - Utilize tools and techniques to analyze.
QI Study Design and Analysis

- Getting started on quality improvement projects
  - Develop change to be implemented.
  - Identify measure to identify improvement.
  - Educate staff on desired change.
  - Implement and test change.
  - Collect, analyze, and evaluate data.

- Make additional changes based on findings.
- Disseminate to all areas.
- Report and display results to reward staff.
- Continue to monitor performance.
- Compare performance internally and externally.
- Celebrate successes!
FMEA for PI

• Traditional techniques adapted from industry
• Creation of Healthcare Failure Mode and Effects Analysis (HFMEA; www.patientsafety.gov) by Department of Veterans Affairs
• Reduce risk before an event happens
• Six main steps

FMEA

• Systematic method used when a new system or redesign of a system is in early stages; also for existing systems
• Analysis completed for each failure identified (known or potential)
## FMEA

1. Define topic and process to be studied.
2. Convene interdisciplinary team.
3. Develop flow diagram of process and subprocesses.
4. List all possible failure modes of each subprocess.
5. Analyze each failure mode and determine action to eliminate, control, or accept.
6. Identify corresponding outcome measure.

### FMEA

- **Step 1: Define the FMEA boundaries.**
  - Describe continuous readiness program and FMEA boundaries.
  - Define individual and team responsibilities.
FMEA

- Step 2: Assemble the FMEA team.
  - Assign team leader and encourage adequate team composition.
  - Complete FMEA Team Start-Up Worksheet.

<table>
<thead>
<tr>
<th>Kaiser Facility:</th>
<th>Date FMEA Started:</th>
</tr>
</thead>
<tbody>
<tr>
<td>FMEA Project Name:</td>
<td></td>
</tr>
<tr>
<td>Team Leader:</td>
<td>Team Sponsors:</td>
</tr>
<tr>
<td>Team Members:</td>
<td></td>
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<td>(Step 2)</td>
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</table>

Team Leader Questions:
1. Are all affected areas represented?  Yes, No, If No, Actions:
2. Are different levels and types of knowledge represented on the team?  Yes, No, If No, Actions:
3. Who will maintain the records?

FMEA Team Project Boundaries (Step 1):
1. Project Purpose (including a brief description of the process under review):
2. What aspects of the FMEA is the team responsible for?  FMEA Analysis
   - Recommendations for Improvement
   - Implementation of Improvements
3. Reporting Duty(ies): Who will receive progress reports?
4. Project Deadline:
5. What is the process if the team needs to expand beyond these boundaries?


Q Solutions, 2nd edition, Figure 3-5
FMEA

• Step 3: Review the process.
  - Flowchart continuous readiness program.
  - Number process and subprocess steps.

FMEA

• Step 4: Brainstorm potential failure modes.
  - Determine all the ways each process and subprocess step could fail.
FMEA

• Step 5: Identify the potential cause(s) of each failure mode.
  - Identifying potential causes at this point provides some insight into probability.

FMEA

• Analysis determines the
  - way the process (or subprocess) can fail to function
  - manner in which failure occurs (failure mode)
  - effect of the failure mode
  - estimate of the severity and probability
  - actions to eliminate or reduce risk of failure.
**FMEA**

- Step 6: For each failure mode, list the potential effects on the patient.

---

<table>
<thead>
<tr>
<th>Process Step</th>
<th>Failure Modes</th>
<th>Potential Causes</th>
<th>Potential Effects</th>
<th>Likelihood or Probability of Harm</th>
<th>Severity of Harm Level</th>
<th>Risk Code or Number</th>
<th>Recommended Actions and Countermeasures</th>
<th>Residual Risk Code After Action</th>
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FMEA

- Step 7: Assign risk codes.
  - Assign a risk code from the risk matrix to each potential failure-mode effect combination.

FMEA

- Step 8: Develop actions or countermeasures to reduce risks.
- Identify feasible actions (controls) to reduce or eliminate risk associated with the failure mode.
FMEA

• Step 9: Reassign risk codes (residual risk).
  - Determine residual risk.
  - Code assists in prioritizing actions and monitoring to determine effectiveness in reducing risk.

• Step 10: Assign responsibility for actions.
  - Assign responsibility for implementing corrective actions and determine project completion date.
FMEA

- Step 11: Monitor the action results and risk reduction.
  - Monitor to evaluate whether the risk reduction strategies have reduced risk.
  - Take additional action if necessary to further reduce risk.
Links for Resources

- Agency for Healthcare Research and Quality (www.ahrq.gov)
- Institute for Healthcare Improvement (www.ihi.org)
- Institute for Safe Medication Practice (www.ismp.org)
- Veterans Health Administration National Center for Patient Safety (www.patientsafety.gov)
- National Quality Forum (www.qualityforum.org)
- National Patient Safety Foundation (www.npsf.org)
Creating Major Change

- Establish a sense of urgency.
- Create guiding coalition.
- Develop vision and strategy.
- Communicate the change vision.
- Empower broad-based action.
- Generate short-term gains.
- Consolidate gains.
- Anchor new approaches in the culture.

Successful Change

- Leadership systems are designed for results.
- Strategy is simple, aligned, and deployed.
- Design of organizational culture is intentional.
- Mission and vision are clearly understood.
- Rapid response is employed.
- Desired results are defined, measured, aligned.
- Decisions are based on sound data.
- Customer focus is foundation.
- Measurement is deployed at all levels.
### Successful Change

- Innovation is valued.
- Partnerships are created.
- Continuous improvement is integrated into daily work.
- Organizational learning is valued.
- Human resource practices support culture.
- Employees are involved.
- Focus is on improving employee knowledge.
- Social responsibility is integral.
- Systems perspective is valued.

### Reducing Resistance

- For people not willing to make the change: set goals, measure performance, provide coaching and feedback, reward and recognize positive efforts.
- For people not able to perform change: provide education and training.
- For people who lack necessary knowledge: communicate, present positive outlook, have clear focus, be flexible, use structured approach, plan and coordinate change, use proactive approach.
Question 1

A quality manager needs to assign a staff member to assist a medical director in the development of a quality program for a newly established service.

Which of the following staff members is most appropriate for this project?

A. A newly hired staff member who has demonstrated competence and has time to complete the task
B. A knowledgeable staff member who works best on defined tasks
C. A motivated staff member who is actively seeking promotion
D. A competent staff member who has good interpersonal skills*
Set your sights on finding quality solutions!