

Instructor Resources Sample

This is a sample of the instructor materials for *The Healthcare Quality Book: Vision, Strategy, and Tools*, Fifth Edition, by Maulik S. Joshi, DrPH, Scott B. Ransom, DO, MBA, MPH, FACHE, Elizabeth Ransom, MD, and David B. Nash, MD.

The complete instructor materials include the following:

- Test bank
- PowerPoint slides
- Answers to the end-of-chapter study questions

This sample includes the materials for chapter 1.

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

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Chapter 1:

Overview of Healthcare Quality



Chapter Outline

- Landmark Quality Reports
- Frameworks and Stakeholders
- Quality Improvement Models



History of the Quality Movement: Five Important Reports

- Quality in the healthcare system is not what it should be.
- Five major reports identify gaps and call for action:
 - The National Roundtable on Health Care Quality’s “The Urgent Need to Improve Health Care Quality” (1998)
 - The Institute of Medicine’s (IOM) *To Err Is Human* (2000)
 - IOM’s *Crossing the Quality Chasm* (2001)
 - The Agency for Healthcare Research and Quality’s (AHRQ) *National Healthcare Quality Report* (2003–2011)
 - National Academies of Sciences, Engineering, and Medicine’s report on *Improving Diagnosis in Health Care* (2016)

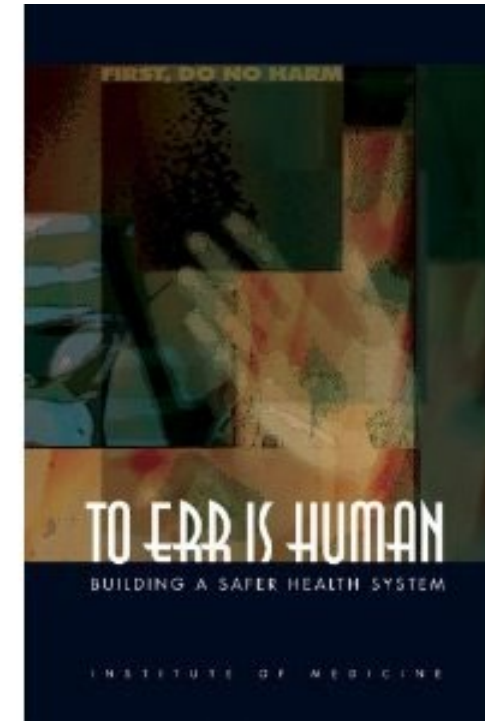


IOM's "The Urgent Need to Improve Health Care Quality"

- "Serious and widespread quality problems exist throughout American medicine."
- Establishes the classification scheme of **"overuse, underuse, and misuse"** to categorize quality defects

IOM's *To Err Is Human*

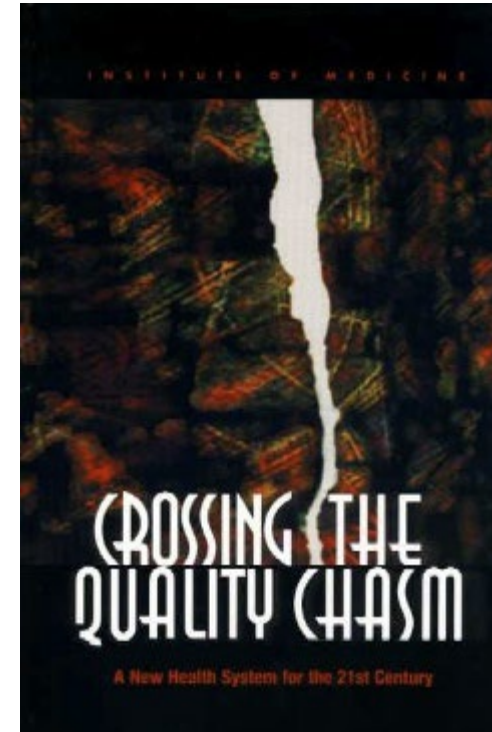
- Captured the attention of key stakeholders for the first time
- Framed the problem in a way everyone could understand
- Led to the identification of patient safety as a solidifying force for policymakers, regulators, providers, and consumers



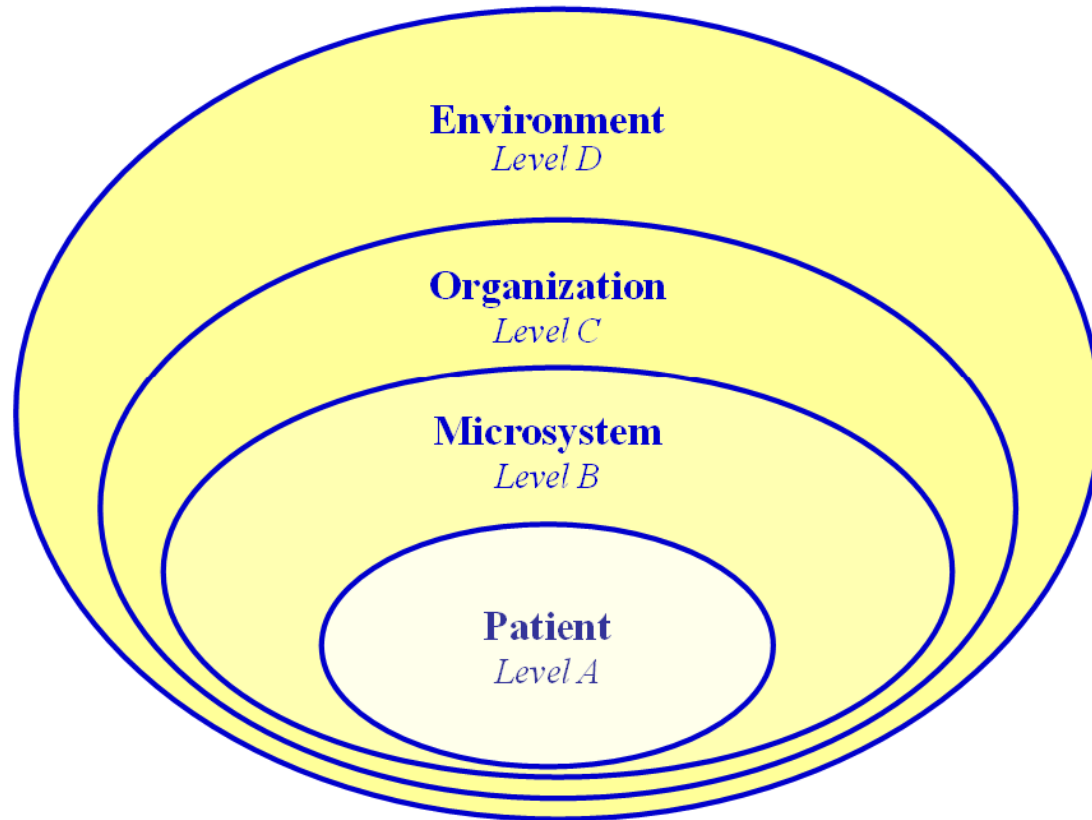
- [A]t least 44,000 to 98,000 Americans die each year as a result of medical errors. . .
- Total national costs . . . of preventable adverse events . . . are estimated to be between \$17 billion and \$29 billion, of which healthcare costs represent over one-half. (Kohn, Corrigan, and Donaldson 2000).

IOM's *Crossing the Quality Chasm*

- Offers a new framework for a redesigned US healthcare system
- Identifies six aims for improvement:
 - Safe
 - Effective
 - Efficient
 - Equitable
 - Timely
 - Patient centered



The Four Levels of the Healthcare System



The underlying framework for achieving the IOM's six aims for improvement depicts the healthcare system in four levels, all of which require changes.



AHRQ's *National Healthcare Quality Report*

- Identifies areas and opportunities for improvement and highlights progress that has been made
- Developed in combination with the *National Healthcare Disparities Report*
- Aims to answer three questions:
 - What is the status of healthcare quality and disparities in the United States?
 - How have healthcare quality and disparities changed over time?
 - Where is the need to improve healthcare quality and reduce disparities greatest?



National Academies of Sciences, Engineering, and Medicine's *Improving Diagnosis in Health Care*

- Claims most people will experience at least one diagnostic error in their lifetime.
- Defined as either a missed or delayed diagnosis, diagnostic errors are thought to account for up to 17% of hospital-related adverse events.
- Up to 5% of patients in the outpatient setting may experience a diagnostic error.
- Recommends healthcare organizations involve patients and families in the diagnosis process, develop health information technologies to support the diagnostic process, establish a culture that embraces change.



Frameworks and Stakeholders

- The STEEP Framework
- Triple Aim/Quadruple Aim
- Stakeholders
- Measurement

IOM's STEEEP Framework

Aim	Definition
Safe	Care should be as safe for patients in healthcare facilities as in their homes.
Effective	The science and evidence behind healthcare should be applied and serve as standards in the delivery of care.
Efficient	Care and service should be cost-effective, and waste should be removed from the system.
Equitable	Unequal treatment should be a fact of the past; disparities in care should be eradicated.
Timely	Patients should experience no waits or delays when receiving care and service.
Patient centered	The system of care should revolve around the patient, respect patient preferences, and put the patient in control.



Triple Aim/Quadruple Aim

Triple Aim: True improvement instead relies on interdependent efforts of three aims:

- 1) Improving the experience of care;
- 2) Improving the health of (identified) populations; and
- 3) Reducing per capita costs of healthcare (Berwick 2008).

Quadruple Aim adds

- Improving the work life for clinicians and staff – Joy at Work



Stakeholders

- Different stakeholders tend to attach different levels of importance to the elements of the STEEEP framework.
 - Clinicians
 - Patients
 - Payers
 - Administrators
 - Society/public/consumers



Measurement

- Evaluations of care quality can be classified in terms of one of three measures (Donabedian):
 - Structure
 - Process
 - Outcome



Measurement: Structure

- *Structure* measures focus on the relatively static characteristics of the individuals who provide care and the settings in which the care is delivered.
 - E.g., education, training, certification
- Structure-focused assessments are most revealing when deficiencies are found.
- Good quality is unlikely if those who provide care are unqualified or if necessary equipment is missing or in disrepair.



Measurement: Process

- *Process* measures focus on what takes place during the delivery of care.
- Two aspects:
 - *Appropriateness*: whether the right actions were taken
 - E.g., whether the correct test was ordered
 - *Skill*: how well the actions were carried out
 - E.g., how well a surgeon completed a procedure
- The use of process measures to assess quality assumes that if the right things are done and are done well, good outcomes of care for the patient will result.



Measurement: Outcome

- *Outcome* measures focus on whether the goals of care were achieved.
 - E.g., whether a patient's pain subsided, the condition cleared up, or the patient regained full function
- Many factors that determine clinical outcomes (e.g., genetics, environmental factors) are not under the clinician's control.



Measurement: Metrics and Benchmarks

- *Metrics* refer to specific variables that form the basis for assessing quality.
- *Benchmarks* quantitatively express the level the variable must reach.

Measurement – Donabedian (Structure, Process, Outcome)

Type of Measure	Focus of Assessment	Metric	Benchmark
Structure	Nurse staffing in nursing homes	Hours of nursing care per resident day	At least four hours of nursing care per resident day
Process	Patients undergoing surgical repair of hip fracture	Percentage of patients who received prophylactic antibiotics on day of surgery	100% receive antibiotics on day of surgery
Outcome	Hospitalized patients	Rate of falls per 1,000 patient days	Fewer than five falls per 1,000 patient days



Quality Improvement Models

- PDSA cycle
- Model for improvement
- Lean/Toyota Production System
- Six Sigma
- Human-centered design

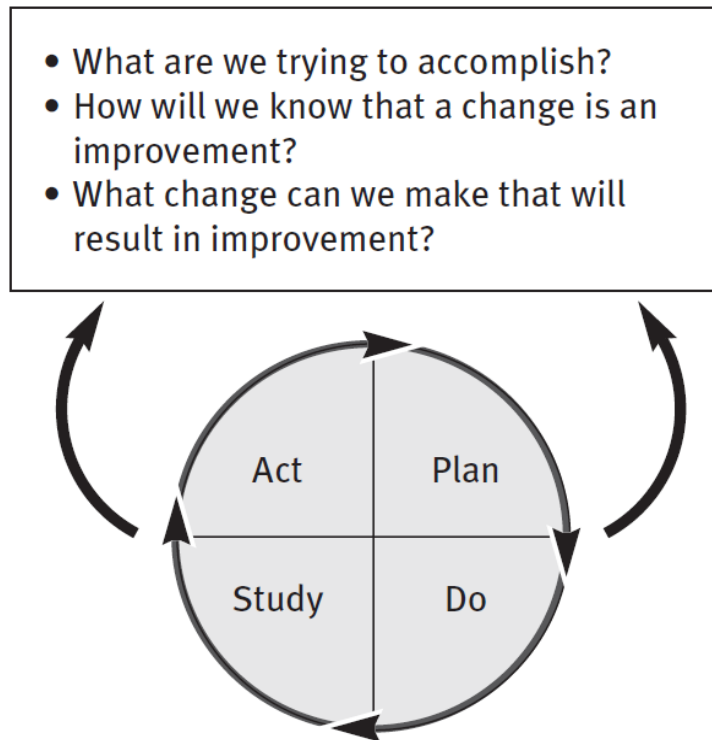


Quality Improvement Models: PDSA

- **Plan.** What are you trying to accomplish? What do you think will happen? What will you measure? Who will do what, where, and when?
- **Do.** Educate and train staff, carry out the plan, document problems and unexpected observations, begin analysis of the data.
- **Study.** Assess the effect of the change and determine the level of success as compared to the goal/objective, compare results to predictions, summarize lessons learned, determine what changes need to be made.
- **Act.** Act on what you have learned, perform necessary changes, identify remaining gaps in process or performance, carry out additional cycles.

Quality Improvement Models: Model for Improvement

Model for Improvement



Source: Langley et al. (1996). Used with permission.



Quality Improvement Models: Lean/Toyota Production System

- Lean manufacturing, or Toyota Production System (TPS), focuses on the removal of waste (muda) and improving flow.
- Seven forms of waste:
 - Overproduction
 - Waiting
 - Unnecessary transport
 - Overprocessing
 - Excess inventory
 - Unnecessary movement
 - Defects
- Place the needs of the customer first.



Quality Improvement Models: Six Sigma

- The aim of Six Sigma is to reduce variation in key business processes.
- Five steps (DMAIC):
 - Define
 - Measure
 - Analyze
 - Improve
 - Control



Quality Improvement Models: Human-Centered Design

- **Empathize.** Thoroughly understand the motivations, needs, and concerns of the client or user.
- **Define.** Translate the perspectives gained from interviewing and observing the end user into clear design challenges and goals.
- **Ideate.** Generate a broad array of potential solutions with minimal self-editing or concern for real or imagined limitations.
- **Narrow.** Identify the most promising solutions usually through the application of specific criteria.
- **Prototype.** Create tangible products representing the potential future solutions, with the goal of communicating back to the end user and further exploring/refining ideas.
- **Test.** Share prototypes and gather feedback, working toward a final solution.



Quality Improvement Tools

- 7 categories of tools
 - Cause analysis
 - Evaluation and decision-making
 - Process analysis
 - Data collection and analysis
 - Idea creation
 - Project planning and implementation
 - Knowledge transfer and spread techniques



Conclusion

- Healthcare quality is not what it should be.
- The patient is paramount in quality improvement efforts.
- There is promising evidence of the capacity for significant improvement.
- Many examples of breakthrough improvements are happening today.
- Call to action for all healthcare stakeholders to continue to rethink and redesign systems.

STUDY QUESTIONS

Chapter 1

1. Think of an experience you, a family member, or a friend has had with healthcare. Gauge the experience against IOM's six aims and identify any opportunities for improvement.

Answer will vary but should include aspects of STEEEP and discuss which aims went well and which aims they identified as an opportunity for improvement.

2. Provide examples of measures of STEEEP if you were looking at the quality of care provided in the emergency room.

Answers will vary, but some examples include:

- *Safety – accuracy of diagnoses, the clinical appropriateness, the skill with which procedures and other medical interventions are performed, and the absence of accidental injuries*
- *Timely – wait times, throughput time, lab/imaging turnaround time*
- *Effectiveness – mortality, patient returns to ED*
- *Efficiency – appropriate imaging and labs, wasteful steps in workflows*
- *Equity – pain management, labs/images ordered, wait time, mortality*
- *Patient-centered – pain management, patient satisfaction, communication, understanding of care*

3. Provide examples of measures of structure, process, and outcome as they relate to the quality of asthma care in the office of a primary care physician.

Answers will vary, but some examples include:

- *Structure refers to characteristics of the individuals who provide care and of the settings where care is delivered. These characteristics include the education, training, and certification of professionals who provide care and the adequacy of the facility's staffing, equipment, and overall organization.*
 - *# of qualified staff to diagnose treat asthma: MDs or DOs, Pulmonologists, Allergist or Immunologist, Respiratory Therapist, etc.*
 - *# of spirometry and challenge test equipment*
 - *# of locations to be tested for asthma*
- *Process is the series of events that takes place during the delivery of care—can also be a basis for evaluating the quality of care.*
 - *Ordering diagnostic test for asthma*
 - *Patients are provided first-line treatment*
 - *% of patients educated on inhaler use*
 - *% of patients who pick up prescribed medications*
- *Outcome measures capture whether healthcare goals were achieved.*
 - *% of patients self-managing their asthma*
 - *% of patients who require emergency room visits*
 - *Improved asthma improvement questionnaire results*