Making the Practice Parameters Work for You!

Using A Quality Improvement Approach
Objectives

1. Discuss common causes of medical errors and develop an approach to error prevention
2. Describe how quality improvement approaches can be used to address latent system failures in the clinical setting
3. Define fundamentals of quality improvement
4. Explain how quality improvement initiatives can be applied to maintenance of certification
Medical Error

- Patient Safety: Freedom from accidental or preventable injuries produced by medical care
- IOM report “To Err is Human”
  - Preventable medical errors kill 44,000 to 98,000 patients each year
  - An estimated 0.2 – 3% of patients experience permanent injury or death from medical care
  - Annual national costs for preventable adverse events estimated at $17 to $29 billion

ABAI Patient Safety Program; IOM. To Err is Human; 1999
Safety is a property of systems

- Every system is designed to get the results that it gets
- Changing systems is difficult, but system change requires:
  - Analysis of current performance
  - Identification and prioritization of areas for improvement
  - Prevention of patient harm
Most common causes of medical errors

• Communication problems
• Inadequate information flow
• Human problems
• Patient-related issues
• Organizational transfer of knowledge
• Staffing patterns/work flow
• Technical failures
• Inadequate policies/procedures
Human Error

• Person Approach
  – Blame focused and not very helpful

• System Approach
  – Identifies system weaknesses that lead to errors
  – Swiss cheese model
    • Active failures – immediate impact
    • Latent failures – make errors more likely

Reason J. BMJ 2000
Error Prone Systems

• Vulnerable system syndrome (VSS)
  – Blaming the frontline
  – Denying system weaknesses
  – Pursuing the wrong types of excellence

• High vs. Low reliability systems
  – High reliability
    • Encourage observation and error reporting
  – Low reliability
    • Punish whistleblowers; discourage system level solutions

Reason et al. Quality Healthcare 2001
Implementing Reliable Systems

• Prevent failure
  – Standardize care and processes

• Identify and mitigate failure
  – Failure is inherent in any process
  – Anticipate failure, “error proof” processes
  – Standardize order sheets

• Redesign systems
  – Report, measure, understand failures
  – Address latent failures

AHRQ Patient Safety Initiative. 2003
Failure analysis

• Retrospective
  – Root cause analysis (RCA)
  – Identify the most fundamental reason for failure of a process

• Prospective
  – Failure Mode & Effects Analysis (FMEA)
  – Criticality index derived from probability of failure and severity of consequence

• Reporting errors and near misses is key
Naturalistic decision making analysis

- Used to appreciate human factors aspects of errors
- Used to study how staff make decisions in the natural work setting
- Evaluates factors such as time pressures, noise or other distractions, insufficient information, and competing goals
Quality Improvement Fundamentals

- Define Model for Improvement
- List the “three key questions” that guide improvement
- Describe effective aim statements and effective measures
- Understand the PDSA cycle
Measuring Performance

• Measurement is a key element of quality improvement
  – Identifies opportunities for improvement if a gap exists between current and desired performance
  – Provides evidence of need for change and allows prioritization of improvement efforts
The Model for Improvement

• **Planning** (improvement team)
  – What are we trying to accomplish? (**AIM**)
  – How will we know that a change is an improvement? (**MEASURES**)
  – What changes can we make that will result in improvement? (**IDEAS**)

• **Implementing**
  – Test ideas and changes in cycles of learning & improvement (**PDSA**)

• **Evaluating ideas**

ABAI Patient Safety Program
Aim Statement

• Answers “what are we trying to accomplish?”
• Guides work and clarifies goals of any improvement project.
Aim Statement

- An aim statement should describe:
  - The amount of improvement desired
  - The patient population involved
  - The time frame for improvement

- An effective aim statement should be:
  - Clear & Focused
  - Quantifiable
  - Appropriately challenging but flexible
Quality Improvement Measures

• Answers “how will we know a change is an improvement?”
• Chart data over time
  – Helpful to develop a measurement tool to abstract clinical data
  – Start with a small sample to evaluate baseline data
  – Graph data over time to evaluate progress
Characteristics of Quality Improvement Measures

- Have clear and specific definitions
- Use small samples of data that can be conveniently collected
- Generate data for plotting over time
- Can be integrated into the daily routine
- Take advantage of exiting data
Ideas

• Answers “what changes can I test that will result in improvement?”

• Numerous methods
  – Process mapping (flow chart)
    • High level or detailed level
    • Detailed process maps especially helpful
    • Map current (not desired) process
  – Brainstorming
    • Consider all possibilities
  – Literature review
    • Identify best practices
Testing Change

• Start small with cycles of PDSA
  – Plan, Do, Study, Act
• Aim for small early successes
  – Select one change to test
  – Understand most individuals are resistant to change
• Plot data over time AND understand why an idea has been associated with any change in system performance
Testing Change

- **Plan**
  - Aim, who, what, when, & data collection plan

- **Do**
  - Execute, collect, & analyze data
  - Note unexpecteds

- **Study**
  - Analyze, compare to prediction, lessons learned

- **Act**
  - What changes to make & next cycle
Testing Change

- Appreciating the cultural context of your microsystem is key to success
  - Interpersonal communication skills are key
  - “Buy in” from microsystem members
- Learn from successes and failures of previous PDSA cycle to refine and re-test improvement ideas
  - Be open to new ideas and suggestions
- Continue with rapid small tests of change
Testing Change

• PDSA
  – Start with small change
  – Test small change on small scale
  – Use results of small tests to inform ongoing improvement efforts

• Continue to measure and chart data over time to sustain improvement
Potential Immunotherapy Errors

• Failure to properly confirm two patient identifiers
• Failure to ask patient about changes in recent health status or medications (i.e. beta blockers)
• Failure to recognize some allergens are unstable when mixed together.
  - Grass pollen allergens are susceptible to proteases in Alternaria extracts.
Potential Immunotherapy Errors

• Two key changes can improve safety of immunotherapy
  – Improve preparation
    • Do not mix mold or insect allergens with non-ragweed pollen allergens
    • Keep crash cart fully stocked with key supplies
  – Improve administration
    • Ask all patients a series of key questions pre-injection
    • Encourage and educate patients to wait 30 minutes after every injection
Maintenance of Certification

- ABAI Practice Assessment/Quality Improvement Activities (MOC Part IV)
  - A practice assessment/QI activity must be completed every five years
- Quality Improvement in Practice for ABAI module
  - Sponsored by ABMS
  - Presents a toolkit and resource library to learn and apply QI methods
Maintenance of Certification

• The Patient Safety Improvement Program for the ABAI
  – Completion of this combination module fulfills requirements not only for part IV but also the patient safety module of Part II MOC
  – One patient safety module must be completed every 10 years as a component of Part II MOC
  – QI tool designed to enhance patient safety in practice with special emphasis on allergen immunotherapy
Summary

• Common causes of medical errors include poor communication, poor policy development, and poor standardization
• Quality improvement can be used to assess latent system failures and rapidly test change ideas
• QI begins with measurement that identifies a gap between current performance and desirable performance
Summary

- Sharing data on current performance can make a compelling case of the need for change and engage members of your team.
- The allergen immunotherapy practice parameter is an excellent resource which clearly describes the standard of practice.
Summary

• These activities can be incorporated into the MOC process
• The ABAI has extensive and useful resources for this type of activity
• Get started at www.abai.org