

EDITORIAL PANEL: WILLIAM E. GOLDEN, MD: NANCY ARCHER, RN, BS, CPHQ; NENA SANCHEZ, MS

Rapid Cycle Improvement: Controlling change

BY PAMELA BROWN, RN, BSN, CPHQ DEBORAH HARE, RN, BSN, CPHQ

ealthcare today is dynamic and ever changing. Advances in technology drive the need for professionals and organizations to actively maintain a high level of quality. Other challenges include work force shortages, a focus on public reporting, greater consumer awareness, an escalating competitive market and patient safety as a priority — to name just a few. Traditionally, quality improvement efforts seem to be driven by the steps in the process ACT: rather than by the adopt improvements themadapt selves. This can delay abandon progress and distract us from what we really

One way to accelerate the process and keep a focus on targeted improvements is through rapid cycle methodology. Rapid cycle is not eliminating traditional quality improvement tools but using them to expedite change and results. By answering three questions you can quickly prepare for action: 1) What do we want to accomplish?

want to accomplish.

2) What changes can we make to result in an improvement? 3) How will we know an improvement has been made? These questions will assist the team in maintaining focus on the desired improvement. (Figure 2)

When deciding what you want to accomplish, first consider estab-

FIGURE 1

Shewhart Cycle: PDSA

PLAN: based on theory/prediction STUDY:

> lished guidelines and current performance. Using information that is already being collected can give an idea of baseline performance. If

to learn

information is not already being collected, just enough concurrent data collection should be conducted to determine whether accepted standards are being met. Looking at a small population in this way through Rapid Cycle helps put the focus on reducing failure rates rather than just improving performance. For example, examine the discharge records of patients with myocardial infarction for a month

> to determine whether betablockers were prescribed to patients who did not have contraindications. This data will allow a comparison of practice to the accepted standard. DO:

small

scale

A team approach, including all those involved in the process, helps to determine what process changes can lead to improvement. When considering strategies, the team makes changes that team members predict will

result in improvement. These can include clarifying procedures, revising protocols, educating staff, or using a new form. A Plan-Do-Study-Act (PDSA) cycle can help execute and test the change. (Figure 1) After planning the

The Arkansas Foundation for Medical Care is the Quality Improvement Organization for Medicare and Medicaid in Arkansas. AFMC works collaboratively with providers, community groups and other stakeholders to promote the quality of care in Arkansas through evaluation and education. For more information about AFMC quality improvement projects, call 1-877-375-5700. This material was prepared by Arkansas Foundation for Medical Care (AFMC) under a contract with the Centers for Medicare & Medicaid Services (CMS). The contents presented do not necessarily reflect CMS policy.

2 • The Journal Volume 98 improvement, apply it on a small scale. If the desired improvement results, apply the change to a larger population to test for continued improvement.

For example, test a new process for administration of preoperative antibiotics to one orthopedic physician's patients for one week. This allows the team to test changes and make adjustments before affecting a large group. It also helps build team members' confidence in the improvement process because they see immediate results. If successful, the change could then be applied to all orthopedic physicians or more than one surgical procedure.

The team will know if the changes resulted in improvement through concurrent measurement. Performing 100% review is not necessary to determine whether improvement has been made. The focus is on the improvement, not the measurement. If all those involved in the process are represented on the team, data collection is usually less complicated than one might assume. Informing staff and senior leaders about the measurements and progress quickly, instead of after 3 or 6 months of data collection, will help gain support for efforts to rapidly improve processes.

Rapid cycle improvement can quickly create an environment that promotes excellence. It encourages health care professionals to actively work toward and meet the highest standards of care and to stay ahead of an ever-changing environment. Excellence in care not only improves outcomes but also builds consumer confidence in those providing the care. A quick comparison of traditional and rapid cycle quality improvement can be seen in Figure 3.

For more information about rapid cycle improvement or other

г		ID	_	2
ь	เษเ	JΚ	E	۷.

FOCUS	•	
FIND	111 1111	What are we trying to accomplish?
ORGANIZE	···	How will we know the change is an improvement?
CLARIFY		What are we trying to accomplish?
UNDERSTAND		How will we know the change is an improvement?
SELECT		What changes can we make that will result in an improvement?

FIGURE 3.

Improvement comparison

TRADITIONAL QUALITY IMPROVEMENT

Pros	Cons
High level of comfort with familiar processes and methods.	Longer cycles of decision-making in the FOCUS-PDSA model.
Larger samples analyzed.	Delays in making changes.
Intermittent, retroactive data collection.	Impact of improvement measures are not realized on a timely basis.
Longer process allows for the multiple levels of communication.	Potential for resistance.
Adaptations can occur to measures taken when failures occur.	Adaptations lag due to process

RAPID CYCLE QUALITY IMPROVEMENT

Pros	Cons
Quick improvements noted with small tests that can be disseminated. Goals reached in 6 to 12 months.	Discomfort from new processes and "rapid" testing.
Failures are noted quickly and affect few cases.	Several small tests necessary to achieve desired results.
Measurement is concurrent and on small samples.	Concurrent data collection requires continuous commitment.
Testing small populations before spreading change increases confidence in the success of the process and minimizes resistance.	Without leadership buy-in, this process is difficult to initiate from the grassroots level.

quality improvement issues, call AFMC at (501) 375-5700.

Pamela Brown is the inpatient project manager for the Arkansas Foundation for Medical Care.

Deborah Hare is director of quality management for White County Medical Center in Searcy.

References:

- Langley G, Nolan K, Nolan T, Norman C, Provost L. The Improvement Guide: A Practical Approach to Enhancing Organizational Performance. Jossey-Bass Publishers. San Francisco, 1996.
- 2. Anderson P, Wortman B. The Quality Auditor Primer. Fifth Edition, Quality Council Indiana Publishers, Indiana, 2001.

Number 10 April 2002 • 3