Accelerating quality improvement within your organization: Applying the Model for Improvement

Ashley Crowl, Anita Sharma, Lindsay Sorge, and Todd Sorensen

Abstract

Objective: To discuss the fundamentals of the Model for Improvement and how the model can be applied to quality improvement activities associated with medication use, including understanding the three essential questions that guide quality improvement, applying a process for actively testing change within an organization, and measuring the success of these changes on care delivery.

Data sources: PubMed from 1990 through April 2014 using the search terms quality improvement, process improvement, hospitals, and primary care.

Study selection: At the authors' discretion, studies were selected based on their relevance in demonstrating the quality improvement process and tests of change within an organization.

Summary: Organizations are continuously seeking to enhance quality in patient care services, and much of this work focuses on improving care delivery processes. Yet change in these systems is often slow, which can lead to frustration or apathy among frontline practitioners. Adopting and applying the Model for Improvement as a core strategy for quality improvement efforts can accelerate the process. While the model is frequently well known in hospitals and primary care settings, it is not always familiar to pharmacists. In addition, while some organizations may be familiar with the "plan, do, study, act" (PDSA) cycles—one element of the Model for Improvement—many do not apply it effectively. The goal of the model is to combine a continuous process of small tests of change (PDSA cycles) within an overarching aim with a longitudinal measurement process. This process differs from other forms of improvement work that plan and implement large-scale change over an extended period, followed by months of data collection. In this scenario it may take months or years to determine whether an intervention will have a positive impact.

Conclusion: By following the Model for Improvement, frontline practitioners and their organizational leaders quickly identify strategies that make a positive difference and result in a greater degree of success.

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Learning objectives

- Apply the principles of the Model for Improvement to clinical scenarios.
- Examine the three essential questions that frame quality improvement initiatives within the Model for Improvement.
- Summarize the four aspects of the "plan, do, study, act" (PDSA) cycle as part of the Model for Improvement.
- Discuss strategies for implementation and growth of quality improvement initiatives.
- Identify resources that can assist a team to apply the Model for Improvement within their organization.

Preassessment questions

Before participating in this activity, test your knowledge by answering the following questions. These questions will also be part of the CPE assessment.

1. **What are the essential steps to the Model for Improvement?**
   a. Aim, measure, outcomes
   b. Objective, drivers, results
   c. Process, analyze, measure
   d. Aim, measure, change
2. **What are the correct steps in the "plan, do, study, act" (PDSA) cycle?**
   a. Do, study, act, plan
   b. Plan, do, study, act
   c. Study, do, plan, act
   d. Act, plan, study, do
3. **The Alliance for Integrated Medication Management Collaborative is the following:**
   a. Organization that created the Model for Improvement
   b. Nonprofit advocacy organization for medication therapy management services
   c. Regulatory arm of the U.S. Health Services & Resources Administration
   d. Facilitated learning and action environment for improving medication use

Introduction to quality improvement

Royals Community Pharmacy (hereafter referred to as Royals) is located near Lakeville Medical Center (LMC). Many of LMC's patients use Royals for prescription services because of its convenient location. Over time, LMC physicians and staff have formed collegial relationships with Royals pharmacists secondary to frequent communications around order clarification or clinical issues identified by the pharmacists.

LMC recently formed an Accountable Care Organization (ACO) and is actively seeking contracts with payers that have incentives for achieving quality benchmarks. Royals staff learned that one of LMC's first quality-related goals is to reduce avoidable hospital readmissions. LMC had collected data showing that the majority of avoidable readmissions were at least in part related to less-than-optimal medication use. Royals staff realized they were in a position to help LMC achieve their goal and decided to approach LMC leaders about collaborating on a quality improvement project focused on improving medication use during the post–hospital discharge transition period. But as the pharmacy staff considered this opportunity, they found themselves unclear about how they should structure the proposed collaboration between the two organizations.

Possibly at no other time in the history of health care have the focus on quality and the expectations for reporting performance been more significant than they are today. Health care reform and the Affordable Care Act both focus strongly on improving the quality of health care while also decreasing the cost. These two concepts increase the value of services and lead to better outcomes in health care systems.[1]

Previously it was often assumed that quality was associated largely with the clinical knowledge and expertise of health care practitioners. Initially this assumption occurred because medical programs were not standardized in the teaching and training of medical professionals. Programs that would try to influence performance would frequently focus on clinical education, ensuring up-to-date knowledge about illnesses and treatment strategies. In the mid-1920s, a shift began to occur when concepts of the quality improvement model started to arise.[2] However, in the early stages this model was focused primarily on health outcomes rather than the structure–process–outcomes model presented by Avedis Donabedian in 1966.[3]

More recently, it has been recognized that focusing on changes within our care delivery systems can have the greatest impact on quality improvement.[2] This can cover a spectrum that extends across all facets of care delivery, including the degree of convenience perceived by a patient in scheduling a medical appointment, effectiveness of workflow across staff and providers in a single setting, or communication strategies that link care providers across settings and organizations.

Most health care organizations are seeking to meet expectations for producing high-quality care delivered to patients and, in doing so, looking at how they can ensure care model design and organizational operations to support improved quality. The Model for Improvement has been identified as an important tool in helping organizations structure improvement work and accelerating their ability to reach quality goals.[4] It was designed to help a care team address three essential questions:

1. What are we trying to accomplish?
2. How will we know if a change is an improvement?
3. What changes can we make that will result in improvement?

These questions have guided the design of the Model for Improvement (Figure 1), which includes setting an aim statement, establishing measures that will determine if there is a change, and selecting changes to implement in the process.

Walter A. Shewhart and W. Edwards Deming are credited with initially defining the need for quality improvement and outlining processes that support this work in the 1920s. Deming initially created the concept of "plan, do, study, act" (PDSA) cycles to support systems change within fields of business and industry. He has been referred to as "the father of the third phase of the Industrial Revolution," as well as the father of quality improvement. His devotion to continual improvement has led to the further creation of transformational theories on quality, management, and leadership.[5]

The Model for Improvement, developed by Associ-