

# **Quality Improvement**

by Capella Healthcare

#### WHAT'S COVERED

In this lesson, you will learn about quality improvement. Specifically, this lesson will cover:

- 1. Introductory Ideas
- 2. Prioritizing Clinical Quality Improvement Initiatives in an Organization

### 1. Introductory Ideas

Has your organization tried to implement quality initiatives to enhance productivity or to cut costs? Did anything significantly change as a result? Is it surprising that, despite management's best intentions, people perceived the changes as the "flavor of the month"? What was missing from these initiatives that needs to be present for the program to succeed?

The only way to significantly improve your organization is to reduce variation by applying statistical thinking. Statistician W. Edward Deming and others developed this approach to modern quality improvement in the 1940s as a way for organizations to deal with complex challenges that they confronted. The approach to improvement they developed was built on the premise that quality improvement is really about process management.

The fundamental ideas of statistical thinking are these:

- All work is a series of interconnected, measurable processes.
- All processes exhibit variation, which impairs their predictability.
- Improvements occur when we understand the effects of inappropriate and unintended variation.

Management needs to allow front-line workers to control process improvement and to then provide the support necessary to achieve success. Deming's improvement method was process-focused and data-driven. He concluded that if you could not measure it, you could not improve it.

#### "In God we trust; all other must bring data."

W. Edward Deming (Balestracci & Barlow, 1996)

Organizations develop projects and teams to improve quality, but it's unclear where people are supposed to find the time for these improvements given that they are already working at capacity. Ultimately, improvement cannot be an addition to people's everyday jobs; it must become everyone's job.



Training healthcare professionals, managers, and staff on the broader concepts of statistical thinking will develop a workforce of problem solvers.

Joseph Juran, an electrical engineer and lawyer, saw the approach to quality improvement as two separate journeys:

- Diagnostic Journey: From Symptom → Cause
- Remedial Journey: Fom Cause → Remedy

In the diagnostic journey, improvement efforts result when we react to variation, that is when results are different from what we expect. Variation indicates an underlying problem or opportunity. To find the root causes, the diagnostic journey requires a diverse team to ask multiple questions to understand the variation. Participants in the diagnostic journey need to use data to identify the most significant opportunities for improvement in a process. This journey will require positing theories about root causes, studying work in progress, analysis, and resulting action. It depends largely on the expertise that all involved in the process have about the process. Next, they need to develop a potentially viable solution and test and evaluate it on a pilot scale to determine feasibility.

In the remedial phase, the team knows the solution and must implement it. This requires change management principles given people's natural resistance to changing the status quo. The Nudge Theory is just one example of change management methods.



#### 🟳 HINT

In the Course Summary lesson, you will find suggested readings for more information about change management methods. You can also click on the above image source link for such readings.

Several quality management models contain elements of quantitative measurements and concepts like these:

- Quality control (quality by inspection)
- Quality assurance (quality by preventing recurrence of outliers)
- Quality circles (quality by forming teams closest to the work)
- Motivation and awareness (zero defects)

These approaches rely on either the objectives or the people, without a system to synergize the two. The Quality Improvement (QI) model developed by Deming, Juran, and others focuses on these three concepts:

- Customer needs must be met.
- Most inefficiencies are the result of measurable variations in process.
- A team approach is usually the most successful way of identifying process issues and improving the process to meet customer needs.

QI combines qualitative and quantitative measurement as well as team efforts in an ongoing, systematically monitored process. In addition to organizing improvement and sustaining it, QI involves all disciplines relative to a process. Processes extend across departments and sometimes across the medical neighborhood, therefore these people need to be involved in the improvement efforts. Management and clinical leader support are key to the cross-functional collaboration and transformation of the system. Deming and Juran's theories and methods will be discussed further as we delve into process improvement methods in a later section.

## 2. Prioritizing Clinical Quality Improvement Initiatives in an Organization

Determining where to start with quality improvement efforts is one of the biggest challenges that leaders face. The healthcare system includes so many opportunities to improve processes and eliminate waste, it can be difficult to know where to start. It is essential to eliminate guesswork and drive decisions with quality data to ensure you are using limited resources wisely. Data can provide an objective view of a situation, removing destructive emotions that sometimes lead to inappropriate actions. The transformation from a crisis-driven to a data-driven organization can meet obstacles if people follow first instincts that do not agree with the data.

One way to stay on this track is to use the Key Process Analysis (KPA), which identifies which clinical processes have the highest variation and consume the most resources. This analysis combines clinical, billing, and cost data and correlates it with ICD-9 codes and all patient refined DRGs. The result is the sorting of each patient encounter into a hierarchy, as follows:

- 1. Clinical program (e.g., orthopedics)
- 2. Clinical family (e.g., joint)
- 3. Clinical work process (e.g., hips or knees)

The combination of clinical and financial data will identify which clinical programs, families, and work processes present the greatest opportunity for improvement in healthcare. This information is the first step in a deeper drill-down to identify variation. Other factors to consider are readiness for change, resources

required, and what the customer (patient) wants, such as timely follow up, improved access to specialists, etc. Leaders must select what key factors to use to compare the key processes, such as patient experience, cost, population size, etc.; measuring what matters most to prioritize the improvements.

Organizations can either contract with a vendor to conduct a KPA or use these concepts to determine the key factor on their own. In the latter case, the organization would run their own comparative analysis using the Pareto Chart to identify which 20 percent of processes are using 80 percent of the resources. This will allow the organization to begin strategic quality-improvement planning by focusing on the highest priority process.



The images below show a KPA using a bubble chart or Pareto chart.

#### Key Process Analysis using Bubble Chart

This bubble chart shows the clinical work processes plotted against the variable direct cost (X-axis) and variation (Y-axis). Note the green septicemia bubble in the upper right quadrant. It represents an area with potential opportunity for improvement and standardization.

Source: www.healthcatalyst.com/clinical-quality-improvement-in-healthcare



To fulfill a given quality-improvement strategy, each organization will need to transform the system. As Deming indicated, the organization will need to align management practices and structures with work processes. This alignment is crucial and must be accomplished through a well-understood, broadly communicated strategy that is essential to change management. Resources need to be allocated accordingly, and the initiatives should be displayed on a visual management board where executives can review weekly progress. Strong leadership commitment with a clear vision and strategy is essential to creating reliable processes and systems. This is not for the weak of heart. It is hard work but is a journey worth taking to achieve high reliability and safe, efficient, and reliable care.

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### Support

If you are struggling with a concept or terminology in the course, you may contact **RiskManagementSupport@capella.edu** for assistance.

If you are having technical issues, please contact learningcoach@sophia.org.