

Six Sigma Makes Sense as Quality Initiative

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by Jill Burrington-Brown, MS, RHIA

Is the Six Sigma business management system the “new kid on the block” in terms of quality initiatives? It may be new to healthcare, but it has been in place at various manufacturers, most notably Motorola, since the 1980s.

This article examines how Six Sigma is being used to improve quality in healthcare settings, plus a look at how it is being used in the Mount Carmel Health System of Columbus, OH.

The Name Counts

Six Sigma was named after the letter sigma in the Greek alphabet, which is used in mathematics to indicate variability. As a methodology, Six Sigma is an exacting approach to quality that companies can apply to products and processes to achieve error-free performance. There is nothing new in the tools of Six Sigma—many of them have been around and used before in total quality management operations.

The key to the success of Six Sigma is twofold. It must have the complete support of the program from the organization’s management and the training of a few key people in a small number of proven methods. Once trained, these leaders are called “black belts” and go on to lead improvement projects. Senior management chooses the improvement projects after they have surveyed customer requirements and identified those that negatively affect the bottom line. Six Sigma is, overall, about saving money as well as improving quality.

Quality as Performance

According to Thomas Pyzdek, a consultant and author of *The Six Sigma Handbook*, Six Sigma is not about quality in the traditional sense. He defines quality as performance that meets internal requirements, while Six Sigma is about helping the organization make money. Pyzdek suggests thinking about quality in one of two ways: potential quality and actual quality. The difference between potential and actual quality is waste. Six Sigma techniques help organizations by producing products and services better, faster, and cheaper.¹

The performance improvement model used in Six Sigma is DMAIC, or define the goals of the improvement activity, measure the existing system, analyze the results, improve the system, and control the new system. Donna Seecof, RN, MSN, a senior manager with GE Medical Systems, notes that this approach sounds like the nursing process itself, which requires caretakers to assess, plan, implement, and evaluate. However, Six Sigma is unlike any other initiative introduced to improve the quality of healthcare delivery.²

What Separates Six Sigma

How is Six Sigma different? Pyzdek observes a primary difference in infrastructure. Six Sigma introduces the concept of full-time, temporary change agents (black belts) making up about one percent of the work force. They are dedicated to producing change, and their performance is judged by their innovation in producing improvements that benefit customers, shareholders, or employees.³

Seecof asserts that the Six Sigma methodology “forces participants to rigorously test assumptions and to document those tests.”⁴ Pyzdek also maintains that the fundamental difference is that Six Sigma is not a quality initiative but rather the end of quality as we know it. The focus on quality is shifted to a focus on strategic goals, applying them to cost, schedule, and other key business metrics, ensuring that the investment produces the expected return.⁵

Six Sigma in Action

Has Six Sigma made a difference in healthcare? It may be too soon to tell. However, Mount Carmel Health System has been using Six Sigma since July 2000 and reports a financial return of \$2.4 million through the end of 2001. Mount Carmel credits its 43 black belts, who are working on 95 active Six Sigma projects, with these results.

In one project alone (the claims processing of their Medicare Choice product), the projected estimate of fixing the problem was \$300,000. In actuality, that amount was \$857,000, leading the organization to assume that improving the process with one parameter improved other parameters as well.⁶

To the leadership of Mount Carmel, Six Sigma is not just a business management system, but “performance improvement on steroids.”⁷ Mount Carmel requires all black belts to leave their positions to work exclusively on projects. Any employee whose position is eliminated through Six Sigma efforts is guaranteed another position within the organization. Perhaps this guarantee is one key to the success of Six Sigma.

The Mount Carmel Health System has lessons to teach the rest of healthcare. Whether the lessons are in applying Six Sigma to organization processes, in management philosophy, or both, they are beneficial to anyone contemplating a Six Sigma implementation.

Notes

1. Pyzdek, Thomas. “The Six Sigma Revolution.” Available at the Quality America, Inc., Web site, www.qualityamerica.com/Knowledgecente/articles/PYZDEKSixSigRev.htm.
2. Seecof, Donna. “Applying the Six Sigma Approach to Patient Care.” *Healthcare Solutions* 2, no. 5 (2000). Available at the GE Medical Systems Web site, www.gemedicalsystems.com/prod_sol/hcare/resources/insights/mins0500.html.
3. Pyzdek, Thomas. “Six Sigma and Beyond.” *Quality Digest*, September 2001. Available at www.qualitydigest.com/sept01/html/sixsigma.html.
4. “Applying the Six Sigma Approach to Patient Care.”
5. “Six Sigma and Beyond.”
6. Lazarus, Ian R., and Keith Butler. “The Promise of Six Sigma, A Rationale Approach for Process Improvement in Healthcare Delivery.” Available on the Creative Healthcare USA Web site, www.creative-healthcare.com/articles/six_sigma.html.
7. Towne, Jennifer. “Case Study 2—Six Sigma Savvy: Mount Carmel Health System Seeks to Make a Difference.”

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