

Glossary of Terms and Definitions:

Black Belt - Leaders of teams responsible for measuring, analyzing, improving, and controlling key processes that influence customer satisfaction and/or productivity growth. Black Belts are full-time positions.

Control - The state of stability and predictability. It is the process of regulating and guiding operations and processes using quantitative data.

Critical "Y" - Element of a process or practice which has a direct impact on its perceived quality. This is what the customer "feels" when there is variation.

CTQ - Critical to Quality - what is most important to the customer.

Customer Needs, Expectations - Needs, as defined by customers, which meet their basic requirements and standards.

Defects - Sources of customer irritation. Defects are costly to both customers and to manufacturers or service providers. Eliminating defects provides cost benefits.

DFSS (Design for Six Sigma) - A systematic methodology utilizing tools, training, and measurements to enable us to design products and processes that meet customer expectations and can be produced at Six Sigma quality levels.

DMAIC (Define, Measure, Analyze, Improve and Control) - A process for continued improvement. It is systematic, scientific and fact based. This closed-loop process eliminates unproductive steps, often focuses on new measurements, and applies technology for improvement.

Green Belt - Green Belts receive the exact same training as Black Belts. The only exception is that Green Belts are not full-time positions.

Master Black Belt - First and foremost Master Black Belts are teachers. They also review and mentor Black Belts. The selection criteria for Master Black Belts are quantitative skills and the ability to teach and mentor. Generally or in many facilities Master Black Belts are full-time positions.

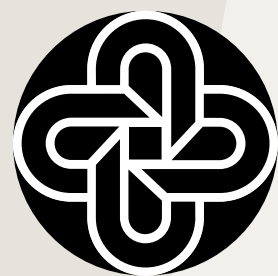
Six Sigma - A vision of quality, which equates with only 3.4 defects per million opportunities for each product or service transaction. Six Sigma strives for perfection.

Variance - A change in a process or business practice that may alter its expected outcome.

Yellow Belt - The most vital resource for the Six Sigma team. The Yellow Belt supports projects in their areas and contributes expert knowledge of the processes the team is studying. They receive specific Six Sigma training that is more limited than that of the Black Belts/Green Belts.

Six Sigma Mission:

Six Sigma will measurably improve quality of care and financial viability by successfully promoting a Six Sigma business culture of data-driven, customer-focused decision-making.

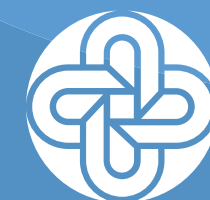
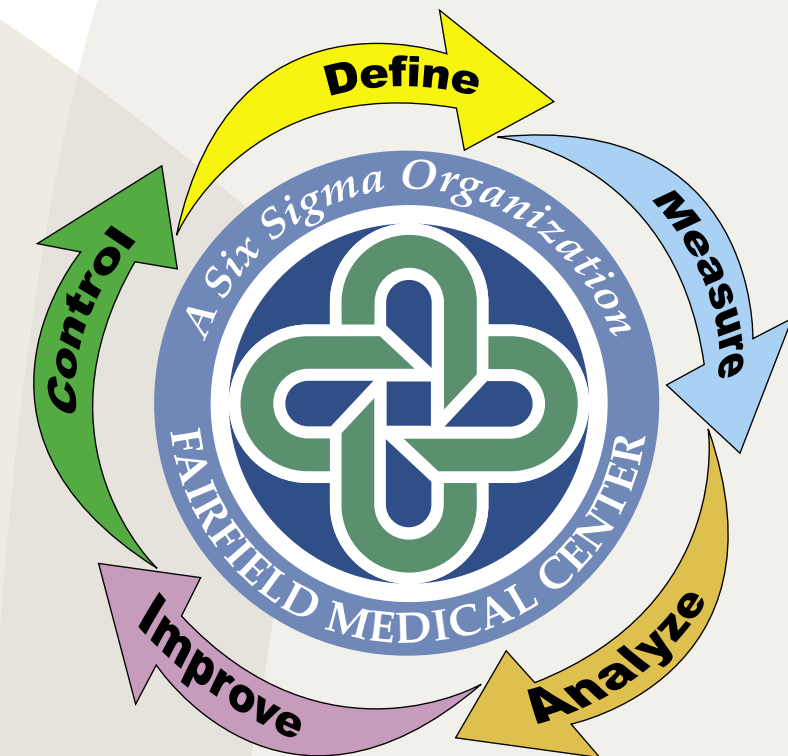


Fairfield
Medical Center

401 North Ewing Street • Lancaster, Ohio 43130 • (740) 687-8000 • www.fmchealth.org



What is Six Sigma?



Fairfield Medical Center

What Is Six Sigma:

Six Sigma is a highly disciplined process that helps us focus on developing near-perfect products and services. It is not a secret society, slogan or cliché. What does “Sigma” stand for? The word is a statistical term that measures how far a given process deviates from perfection. The central idea behind Six Sigma is that if you can measure how many “defects” you have in a process, you can systematically figure out how to eliminate them and get as close to “zero defects” as possible. Six Sigma has changed the DNA of Fairfield Medical Center - it is now the way we work - in everything we do and in every product we design.

The Six Sigma Strategy:

To achieve Six Sigma quality, a process must produce no more than 3.4 defects per million opportunities. What is an “opportunity?” It is defined as a chance for nonconformance, or not meeting the required specifications. This means that we need to be consistent in executing our key processes. Six Sigma is a philosophy that is part of our business culture. Above all Six Sigma is about improving quality and reducing errors, saving money, and improving to better meet the needs of our customers.

Why Is This Important:

It is important for reasons such as profitability, customer satisfaction, quality care/clinical outcomes, and developing customer loyalty. Successes for Six Sigma are improvements to the bottom line, more consistent processes, reduction in rework and unnecessary steps.

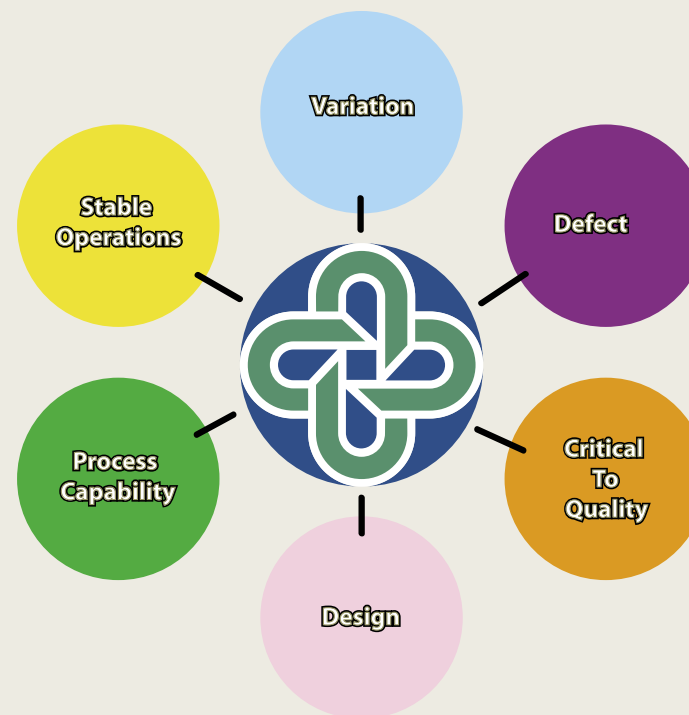
What Do Our Customers Feel:

When we look at ourselves we see the average, and we ask how we do our processes average over time? Customers feel the variation in our process. We have found that what the customer wants is consistent, predictable, and high quality processes. If you don’t meet what they expect, they feel it. If you consistently meet and sometimes exceed their expectations, you have established loyalty.

Key Concepts Of Six Sigma:

At its core, Six Sigma revolves around the customer, by focusing solutions and processes on what is best or most important to the customer.

Critical to Quality	<i>Attributes most important to the customer</i>
Defect	<i>Failing to deliver what the customer wants</i>
Process Capability	<i>What your process can deliver to your customer</i>
Variation	<i>What the customer sees and feels</i>
Stable Operations	<i>Ensuring consistent, predictable processes to improve what the customer sees and feels</i>
Design for Six Sigma	<i>Designing to meet customer needs and process capability</i>



DMAIC Methodology:

The Six Sigma DMAIC (Define, Measure, Analyze, Improve, Control) methodology can be thought of as a roadmap for problem solving and product/process improvement. Most companies begin implementing Six Sigma using the DMAIC methodology, and later add the DFSS (Design for Six Sigma) methodologies when the organizational culture and experience level permits.



Six Sigma Can Be Understood/Perceived At Three Levels:

1. Metric: 3.4 Defects Per Million Opportunities

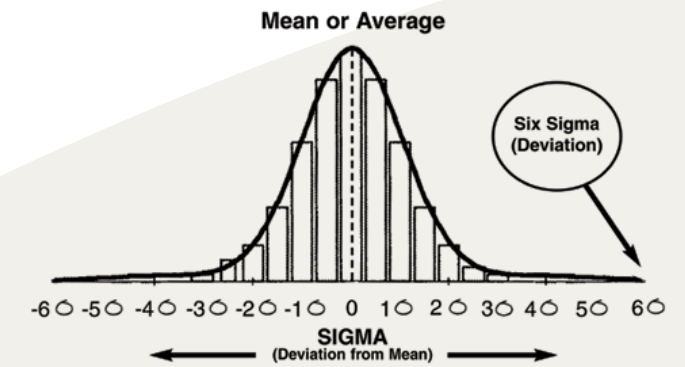
A process that is at Six Sigma will have only 3.4 defects per million opportunities. By monitoring what is important to the customer, this gives us a heads up about how the customer pictures the process.

2. Methodology: DMAIC /DFSS structured problem solving roadmap and tools

This is a systematic, data driven approach to problem solving. It also focuses solutions and processes around what is critical to the customer.

3. Philosophy

Reduce variation in your business and make customer-focused, data driven decisions.



This bell shaped curve is called “standard normal distribution” in statistical terms. In real life, a lot of frequency distributions follow normal distribution, as is the case in the illustration. To increase a process performance, you have to decrease variation. Less variation provides:

- Greater predictability in the process
- Less waste and rework, which lowers costs
- Products and services that perform better and last longer
- Happier customers

The objective of Six Sigma Quality is to reduce process output variation. This is so that on a long-term basis, which is the customer’s aggregate experience with our process over time, this will result in no more than 3.4 defect Parts Per Million (PPM) opportunities (or 3.4 Defects Per Million Opportunities – DPMO).

For a process with only one specification limit (Upper or Lower), this results in six process standard deviations between the mean of the process and the customer’s specification limit (hence, 6 Sigma).

For a process with two specification limits (upper and lower), this translates to slightly more than six process standard deviations between the mean and each specification limit such that the total defect rate corresponds to the equivalent of six process standard deviations.