Pursuing "Virtual Perfection"

Quest Diagnostics

Six Sigma Quality:
an accuracy rate of 99.99966% or
3.4 errors per million opportunities…

CDC – Quality Institute 2003
April 14, 2003
Atlanta, GA

Quest Diagnostics Incorporated

A Quick Overview...

Company Vision

"Dedicated People Improving the Health of Patients through Unsurpassed Diagnostic Insights"

Overview

- ❖ 130 Million Patient Encounters / Year
- ❖ >30 Full Service Regional Laboratories
- ❖ 2 Esoteric Testing Laboratories
- ❖ 1,700 Patient Service Centers
- ❖ 140 Rapid Response Laboratories
- ❖ $4.1 BB+ Revenue
- ❖ 35,000+ Employees

What Is Six Sigma?

A Business Performance Strategy

- ❖ Virtual Perfection
- ❖ Rigorous Proven Methodology
- ❖ Customer – Focused
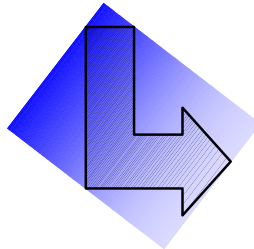- ❖ Data - Driven Discipline

Six Sigma at Quest Diagnostics

- ❖ 156 Active Black Belts/Master Black Belts
- ❖ 674 Active Green Belts
- ❖ 400 Black Belt Projects (181 completed)

Our Moral Imperative

Eliminate Errors in Diagnostic Testing to Provide Our Patients with the Highest Quality Healthcare

Six Sigma quality is a moral imperative in healthcare services.

But Six Sigma also makes business sense and generates cost savings.

Highest Quality = Lowest Cost

| Sigma	% Accuracy	DPMO	Cost of Poor Quality
6	99.9997%	3.4	Less than 1% of gross sales
5	99.98%	233	5 – 15% of gross sales
4	99.4%	6,210	15 – 25% of gross sales
3	93.3%	66,807	25 – 40% of gross sales
2	69.1%	308,537	Not Competitive

Good Companies { (rows 4 and 3)

Source: Mikel Harry

Quality Varies by Process

Quality levels vary by lab and location.

- Analytical processes have high quality and low variation
- Pre- and Post-Analytical processes have more defects and variation
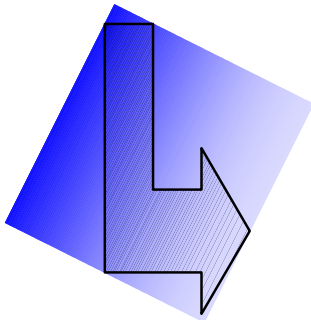
Conclusion:

Don't Focus Simply on Analytical Quality

Six Sigma Success

Case Study   Missing/Lost Specimens After Log-In

Project   **Replications**   **Synthesis**

2 Project Replications

Wave 1 Project

- *93% Defect Reduction*
- *89% Defect Reduction*

- **12 Core Solutions**
- **11 Recommended**
- **5 Optional**

89% Defect Reduction

9 Solution Replications

- *Standard Driven by Functional Leadership*

Quest Diagnostics®

Multiple Projects/Replications Generate Six Sigma Standards

Case Study

Hospital Specimen Collection Errors

A <u>collaborative</u> project with a hospital system to assess specimen integrity and safety issues of blood collection across 3 hospitals.

Outcome: Achieved 50% defect reduction. Process improvements implemented for specimens drawn in the ER and by nurses in other key areas of the hospital.

Six Sigma & Patient Safety

Some Learnings...

❖ **Measurement**

- Measure the Right Things Right

❖ **Control**

- Management Processes for Monitoring, Ownership and Appropriate Action

❖ **Disciplined Improvement**

- Customer-focused, Data-driven Improvement Efforts

❖ **Design**

- Focusing on System Design v. Sub-process incremental improvement

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National Quality Indicators

Baseline Metrics: Initial Thoughts & Defects We Measure

Laboratory Process Flow	PPM Measure
❖ **Pre-Analytical**	
▪ Collect the Specimen	→ Specimen Re-collection, QNS
▪ Transport the Specimen	→ Missed Pickups, Lab Accident
▪ Process the Specimen	→ Lost Specimens, TNP
❖ **Analytical**	
▪ Perform Diagnostic Tests	→ Internal/External Proficiency
▪ Produce Test Results	→ Corrected/Amended Reports
❖ **Post Analytical**	
▪ Medical Report to Physician	→ Turnaround Time
▪ Address Questions from Physicians	→ Speed to Answer Telephone
▪ Produce Accurate Invoice for Services	→ Missing Information
▪ Collect Payment	→ Payer Adjustment Report