

**What is a Sigma  
and why do I  
need Six?!?**

# Brief History of Six Sigma/Lean

- Sigma ( $\sigma$ ) is a letter in the Greek alphabet used by statisticians to measure variability in any process.
- The “Six Sigma” concept began with Motorola in the mid 1980s. However, its processes and basic concepts have been used by the Japanese since the 1940s. By utilizing Six Sigma, Motorola won the Malcolm Baldrige National Quality Award in 1988 and the Six Sigma revolution began.
- In the simplest explanation, by following the guidelines of Six Sigma, there should be approximately 3.4 problems for every 1,000,000 times something occurs.

# Levels of Six Sigma

- White Belt – Completed an overview of Six Sigma (four hour course).
- Yellow Belt – More complex overview from White Belt certification (Two day, 16 hour course). A Yellow Belt cannot work on a project alone but can serve as a subject matter expert.
- Green Belt – Focused training on the DMAIC method (Define, Measure, Analyze, Improve and Control) – 2 week course. A Green Belt can be the team leader for one project at a time.
- Black Belt – Four week training, very detailed. The Black Belt oversees multiple projects at one time.
- Master Black Belt – Two week training session.




# Six Ingredients of Six Sigma

- Genuine focus on the customer.
- Data- and fact-driven management.
- Process focus, management and improvement.
- Proactive management.
- Boundary-less collaboration.
- Drive for perfection, tolerate failure.

# Sample Projects

- Reorganizing Supply Area in Emergency Department – resulted in additional charges generated in the ED by over \$100,000/year.
- Improving ED wait time – reduced by 40% - from approximately 12 hours to just below 3 hours.
- Improved JC Core Measure Scores in AMI, CHF, Pneumonia by 12%
- Reorganizing incomplete chart area of HIM Department to improve efficiency among staff.
- Target Corp. saved more than \$100 million over the past 6 years due to its program.



Examples of what  
would benefit from a  
Six Sigma project ?





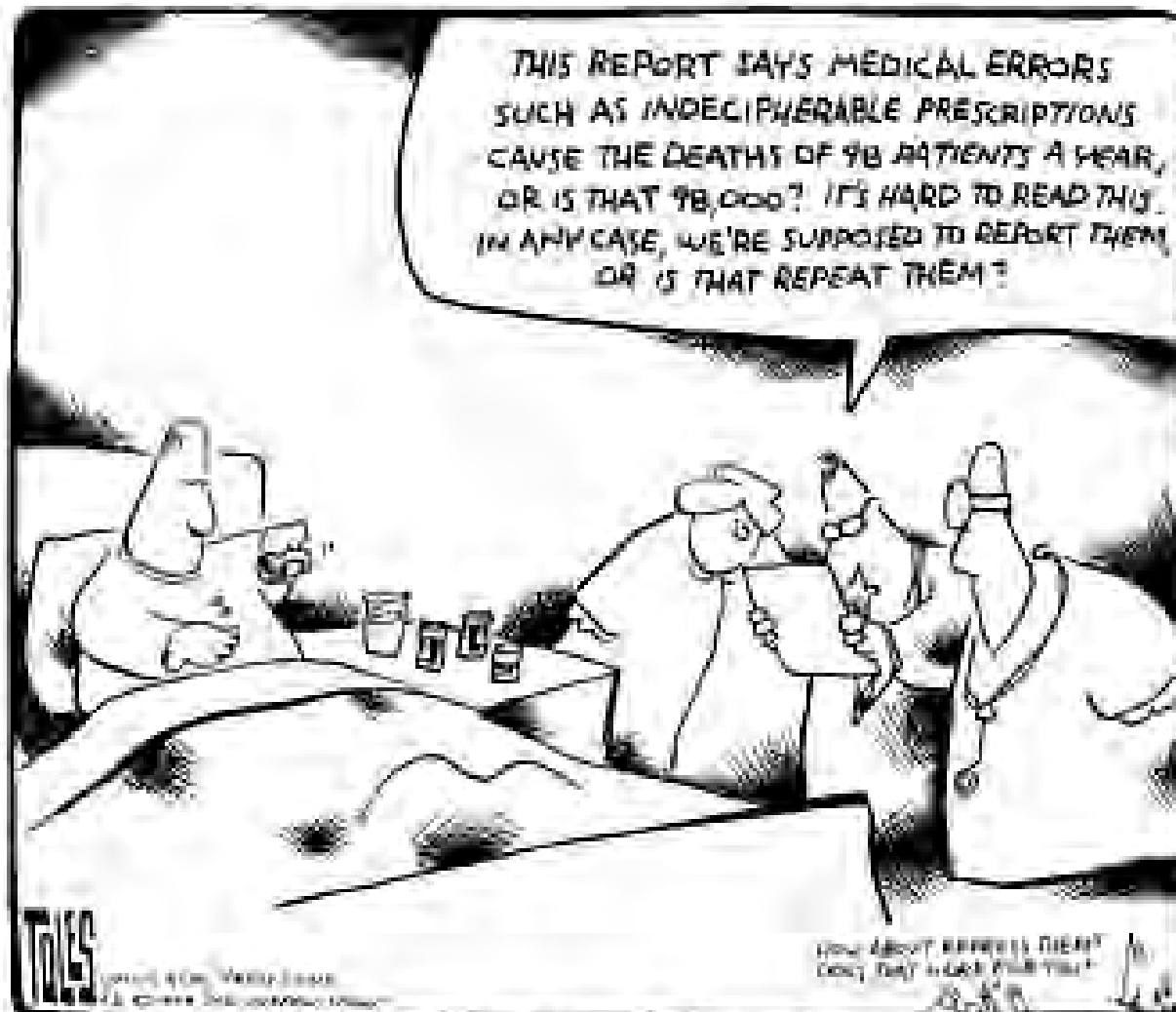
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**“Anyway, to make a long story short, the  
medical examiner who performed  
your autopsy was fired.”**



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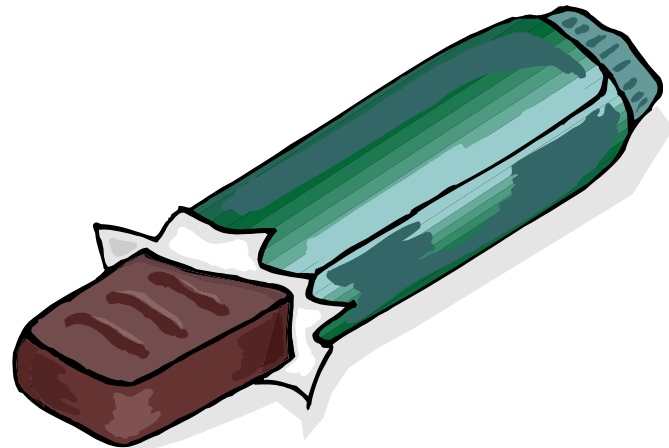
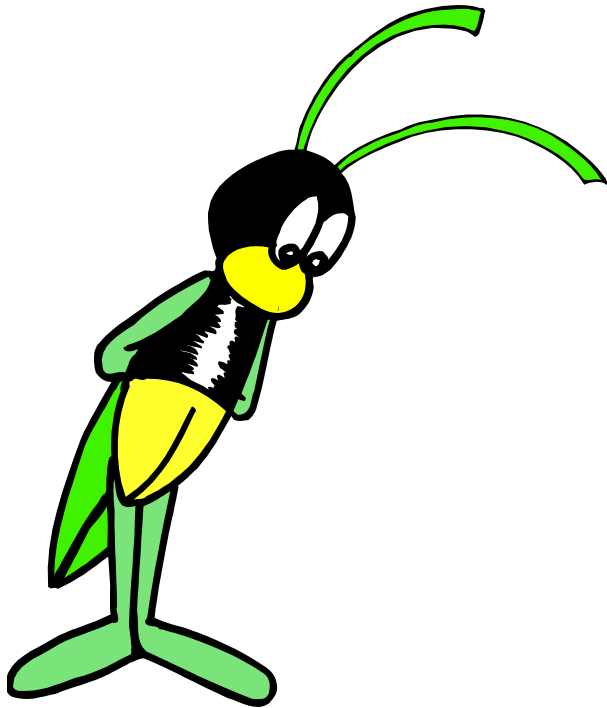
**SAMPLE - NOT FOR RESALE**





More than 80,000,000 Hershey kisses are made each day.

The average chocolate bar has 8 insect legs in it.



# Healthcare Related Error Statistics

- The total number of medical errors and deaths equal SIX jumbo jets crashing every day.
- The error rate of ICUs is equivalent to the post office losing over 16,000 pieces of mail every hour of every day.
- In one decade, the deaths caused by conventional medicine were approximately 8 million – more than all the casualties from all the wars America has ever fought in.
- 7000 patients die each year because of sloppy handwriting.
- 400,000 preventable drug-related errors occur in hospitals each year; 800,000 occur in long-term care settings and 530,000 occur in outpatient Medicare clinics.
- Nearly 14% of doctor visits were missing test results and other documentation, resulting in 44% of patients being adversely affected.
- 160,000 lab misidentification errors occur each year.



# Six Sigma Courses/Additional Information

Villanova University

Six Sigma.us

Six Sigma Online

