

Project Submission:  
2009 Delaware Valley Patient Safety Award

**LANKENAU HOSPITAL**

*“Engaging an Organization in  
Patient Safety and Performance Improvement”*

*Engaging an Organization in Patient Safety and Performance Improvement*

Beginning in 2008, the hospital embarked on a journey to improve the safety and reliability of care delivered at the hospital as part of the health system's strategic plan and as part of goals set forth by national patient safety and quality organizations. An innovative model was developed and utilized that combined the best practices of medicine, nursing, engineering, communication, and organizational psychology. The first component of the model is the optimization of operational processes to best evidence based practice. This process is then clearly communicated to all key stakeholders and a change to the culture begins. Finally, there is continuing robust feedback and accountability to ensure the process change and culture is sustained for the long term. The model has been embraced by the medical and nursing staff and has led to dramatic results. Multidisciplinary clinical teams supported by performance improvement engineers and coordinators worked on 16 multi-phased performance improvement projects over the course of the year utilizing a unique 11 step performance improvement system that became hardwired into the culture of continuous improvement. Statistically significant improvements in patient satisfaction, clinical outcomes, and patient safety were evidenced as were improvements in employee engagement, financial performance and consumer perception of the hospital.

Title

*Engaging an Organization in Patient Safety and Performance Improvement*

Goals

- Improve the safety and reliability of care delivered
- Engage hospital leadership in a performance improvement model
- Involve multi-disciplinary clinical team in improvement projects
- Drive significant improvements in:
  - o Clinical outcomes
  - o Patient safety
  - o Patient satisfaction

Baseline Data

Date ranges of baseline data reflect the period prior to interventions being implemented.

Clinical Outcomes (Jan 2007 – May 2008):

- Mortality Rate Index: 0.84
- Complication Rate Index: 0.99

Core Measures (Jan 2007 – May 2008)

- Acute Myocardial Infarction: 97.1%
- Congestive Heart Failure: 87.8%
- Pneumonia: 82.6%
- Hip and Knee: 75.0%

Hospital Acquired Infections (Jan 2008 – Dec 2008)

- Catheter Associated Urinary Tract Infections: 4.25  
(July 2008-Dec 2008 due to data collection concerns prior to that time)
- Central Line Associated Blood Stream Infections: 2.58
- Ventilator Associated Pneumonia: 9.47

Patient Satisfaction (Jan 2007 – May 2008)

- Rate Hospital (HCAHPS): 63.7%

Interventions

Model Overview:

1. Identify best evidence based practice to optimize operational processes
2. Clearly communicate best process to all key stakeholders involved in the process; Change management techniques to work at fundamentally changing culture in support of improvements.
3. Robust feedback and accountability at the individual level to sustain the change long term.

Tools:

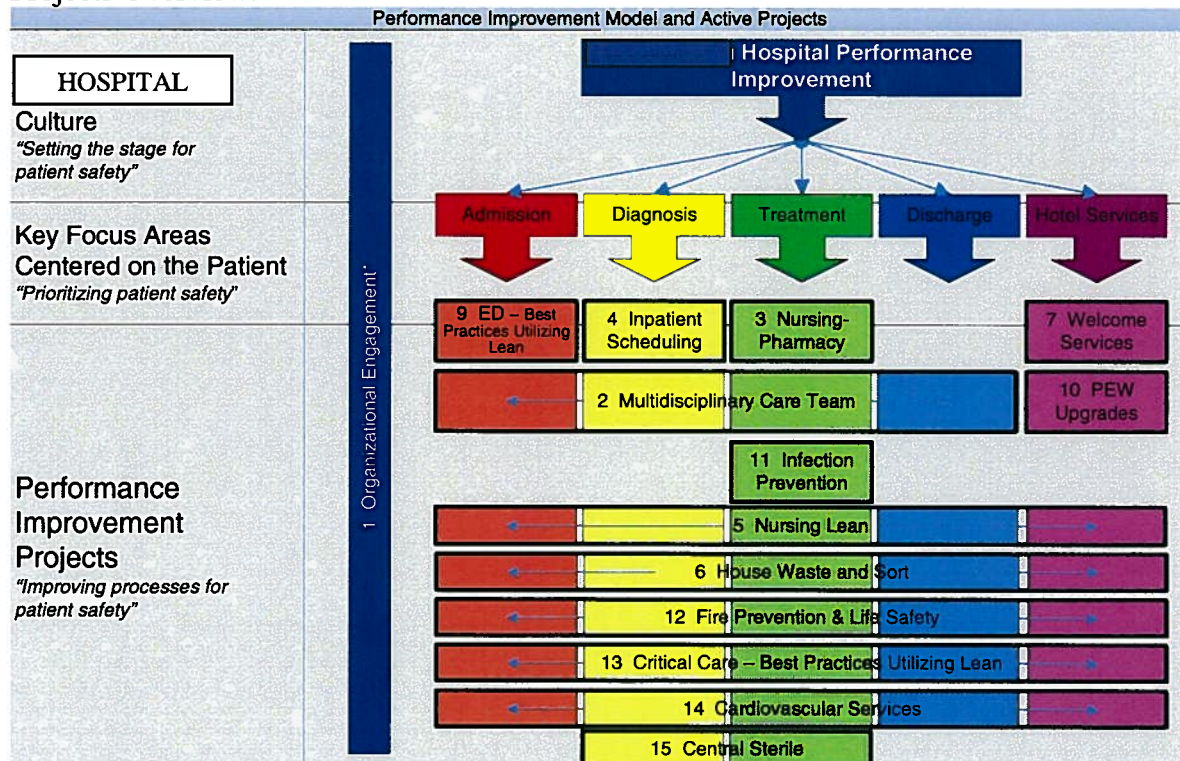
- Health System Safety & Quality Dashboard
- Monthly 2 Day Senior Operations Team Performance Improvement Meetings
- Defined Performance Improvement Project Charters
- Dedicated Personnel – Performance Improvement & Data Analysis

- Project management software with alert capability
- Algorithm/matrix to determine prioritization and which operational engineering improvement model to use: LEAN, Six Sigma, FMEA, Root Cause Analysis
- Accountability audits with alerts for individuals, processes, and outcomes
- Individual and Team Measurement Reports
- Communication plan tied with reward and recognition for sustainable improvement

Performance Improvement Project Methodology:

- Plan
  1. See/Hear/Touch
  2. Prioritize
  3. Measures
- Learn and Do
  4. Eliminate Waste
  5. Determine and Standardize Key Processes
  6. Select Optimal Operational Engineering Performance Improvement Model for Prioritized Improvements
  7. Evaluate Technology Solutions
  8. Build Accountability
  9. Continual People, Process, and Outcome Measurement
- Sustain
  10. Adherence
  11. Perseverance

Projects Overview:



## 2 Cornerstone Projects:

### 1. *Multi-Disciplinary Care Team*

#### Background

- Dashboard showed opportunity for improvement in Patient Satisfaction and Core Measures
- Analysis revealed that patients were not provided with a consistent team of care providers
- Nurses on the Inpatient units did not have consistent care partners

#### Design: Multi-Component Charter undertaken

- Development of Unit Based Organizational Structure
  - Monthly Care Team Safety & Quality reviews
  - 360 Evaluations of all Care Team members
- Formalized Multidisciplinary Care Team
  - Medicine
  - Surgery
- Coordinated care team patient rounds
  - Daily care plan documented
  - Robust discharge planning
  - Multidisciplinary clinical education
  - Quality initiatives incorporated into discussions
- Medication Reconciliation improvement

### 2. *Infection Prevention*

#### • Background

- Initiated in July 2008
- Dashboard showed poor performance in device related infections
- Data collection and management practices not standardized
- Opportunity for process improvements in infection prevention

#### • Design: multi- component charter undertaken with multi-disciplinary PI team:

- Hospital-wide advertising & hand-washing: including hand wash audits and individual feedback
- Efficient data collection: ensure consistency and reliability
- Employee & Medical Staff Accountability: individual feedback
- Targeted clinical programs for device associated infections: teams led by physician and nurse
- Clinical Informatics support
- Enhanced environmental cleaning: detailed cleaning evaluation and specifications for each item in the patient care areas
- Communication of measures & activities: celebrating our successes
- Biomedical engineering partnership with Drexel University: advanced technology
- Focused Critical Care initiatives: for our most vulnerable patients
- Development and Growth of Infection Prevention workforce

## Results

### *Multi-Disciplinary Care Team*

	<b>PreMDCT (Jan07-May08)</b>	<b>PostMDCT (Jun08-Dec08)</b>
<b>Patient Satisfaction</b>		
Rate Hospital - HCAHPS	63.7%	70.1% *
<b>Clinical Outcomes</b>		
Mortality Rate Index	0.84	0.74 *
Complication Rate Index	0.99	0.67 *
<b>Core Measures</b>		
Acute Myocardial Infarction	97.1%	99.4%
Congestive Heart Failure	87.8%	94.3% *
Pneumonia	82.6%	89.0% *
Hip and Knee	75.0%	94.2% *

\* - Statistically Significant at 95% Confidence Interval

### *Infection Prevention*

Rate/1000 Device Days	<b>CY08</b>	<b>Jan - Apr 09</b>
<b>CA-UTI (symptomatic only)</b>	4.25 (Jul-Dec only)	1.29 *
<b>BSI</b>	2.58	0.37 *
<b>VAP</b>	9.47	1.30 *

\* - Statistically Significant at 95% Confidence Interval

### How this initiative may be replicated throughout the region

The performance improvement model was designed to work with various initiatives and programs in healthcare. The supporting organizational structure and leadership commitment could serve as sample for other organizations that are considering a large scale improvement initiative. The model is unique in that it provides a set of improvement tools and methods that can be tailored for the problem at hand. In addition, there are specific project examples that demonstrate the effectiveness of the model. The particular projects described here address common issues in healthcare organizations. There is tremendous opportunity to share our organization's approach and learning with others in the region to improve the safety and reliability of care delivery.