Impact of the 2 South Observation Unit on Care of Patients Presenting With Chest Pain, Syncope and Abdominal Pain

Aziz Ansari, DO, FHM
Elizabeth Schulwolf, MD MA
Helen Lee, MD
Laura Digangi
Jan Lukas, RN
Opportunity Statement

- Observation units focus on a subgroup of patients who are less critically ill than patients who require full admission to the hospital
- These units provide centralized care which improves efficiency
- We sought to evaluate effects on length of stay (LOS) and total charges in selected observation status patients before and after establishing the Observation Unit at Loyola
- Data timeline:
  - Pre-project baseline: FY Q4 2009
  - Post implementation: FY Q4 2010
Observation Status Definition

- Observation status is an outpatient class of service for a patient requiring the use of a hospital bed, periodic monitoring and meets medical necessity.
- We analyzed only those patients that were classified as observation status on admission in both groups.
- We excluded patients that were:
  - Classified as inpatient at any time during the admission in both groups, regardless of the patients’ length of stay.
  - Transitioned to inpatient status during their admission.
Aim Statement

- Reduce total charges and LOS with the establishment of the 2 South Observation Unit in patients with the 3 most common diagnoses encountered:
  - Chest pain
  - Syncope
  - Abdominal Pain
Solutions Implemented

- A closed unit was established on 2 South that is staffed by hospitalists, a core group of nurses and patient care technicians.
- To capture patients most appropriate for care on the observation unit a hospitalist screened the patients needing additional care in the hospital.
- The ER physicians were educated on triaging patients prior to calling the hospitalist to discuss the cases.
Methods

- Administrative data from Quarter 4 of 2009 (pre) was compared to Quarter 4 of 2010 (post)
- All patients were cared for by a hospitalist
- Patient cohorts were compared overall and then by primary diagnosis: chest pain, syncope or abdominal pain
- Continuous variables (charges and LOS) were compared using t-test
- Dichotomous variables were compared using chi-square test
- All data was analyzed using Stata 11, College Station, TX and Microsoft Excel
Results: LOS

- Overall: N=332
- Chest Pain: N=262
- Syncope: N=39
- Abdominal Pain: N=31

Significance levels:
- P<0.001
- P<0.05
- NS (Not Significant)
Results: Percentage of Patients Hospitalized Longer than 24 Hours

- Overall: N=332
  - Pre-Obs Unit: P<0.001
  - Post-Obs Unit: P=0.003

- Chest Pain: N=262
  - Pre-Obs Unit: P=0.003
  - Post-Obs Unit: NS

- Syncope: N=39
  - Pre-Obs Unit: P=0.013
  - Post-Obs Unit: NS

- Abdominal Pain: N=31
  - Pre-Obs Unit: NS
  - Post-Obs Unit: NS
Results: Total Charges

- Overall: N=332
- Chest Pain: N=262
- Syncope: N=39
- Abdominal Pain: N=31

Dollars

Pre-Obs Unit
Post-Obs Unit
Analysis of Data

- We found that the overall average LOS was significantly decreased in the OBS unit (19.04 hours vs. 29.55 hours).
- Overall Charges also significantly decreased ($7,230 vs. $8,709).
- In chest pain patients, significant decreases were seen in LOS (17.92 hours vs. 26.71 hours) and charges ($7,157 vs. $8,920).
- In syncope patients, LOS significantly decreased (23.00 hours vs. 43.44 hours).
- In abdominal pain patients, no statistically significant results were found.
- Overall, the percentage of patients staying beyond 24 hours was reduced from 65% baseline to 35% post implementation of the 2S Observation Unit.
Next Steps

- Case Managers have begun to manage the triage process of these patients to ensure patients who meet the observation criteria are admitted correctly.
- Establish diagnosis-specific protocols to further improve throughput and standardize care: chest pain is our first endeavor.
3 West Back to Basics:
A Collaborative Approach to Reducing Pressure Ulcer Rates
Team Members

Nursing: Connie Clark RN MSN, Vice President of Nursing; Susan Branda RN, CWCC; Joy Bongot RN, BSN, CWCC; Charmaine Doria RN; Bonnie Cole RN, Assistant Nurse Manager; Diana Nolan, PCA; Chantelle Cole, BA/BS, Unit Secretary/Nursing Student; Ann Chiero RN, MSN, Nurse Manager

Dietary: Falguni Parikh RD, LDN, MPH

Quality: Savanna Stout MBA/MPH, Data Analyst/PI Coordinator
Opportunity Statement

The Nursing Department monitors acute care pressure ulcer incidence on each clinical nursing unit. In 2010, 3 West noted an increase in the number of overall pressure ulcers which correlated with the patient population shift from a general medical/surgical unit to a more chronic medical unit.

AIM Statement

To sustain hospital-acquired acute care pressure ulcer incidence per 1000 patient days rate on 3 West < 3.00, with a goal of 0.00.
Solutions Implemented

- Education completed for RN and PCA staff on proper identification of patients at risk for pressure ulcer development and the staging of patients with pressure ulcers.

- Initiated coccyx dressing for patients with any sign of skin redness.

- Daily rounds by the Nurse Manager or charge nurse and the RN to highlight patients with pressure ulcers or patients at risk for developing pressure ulcers.

- Instituted preventative measures that can be utilized; expanded rounds to include dietitian for daily nutritional assessment to determine needs for increased protein or calorie intake.

- Utilized our Certified Wound Clinicians as a resource and informed them of the patients on the unit with pressure ulcers and those patients at high risk for pressure ulcer development.

- Back-to-Basics campaign initiated: Implemented am and pm care to include back, butt and heel rubs. Repositioned the patient at least Q2 hours. Implemented shift-to-shift report to evaluate skin condition. Applied lotions and ointments to the skin to prevent friction.

- Trialed Fitzsimmons mattresses which prevent friction and moisture.
Analysis

Pressure ulcer rate decreased from >7.00 in April 2010 to current rate of 1.99.

Interventions most effective as an important part of the clinical team.

Also wound care clinicians served as valuable resources to nursing staff, providing ongoing education.
3 West Pressure Ulcer Rate

Pressure Ulcer Incidence per 1000 Patient Days

UCL = 8.18
CTL = 4.75
LCL = 1.32

Goal = 3

Patient Shift: Population
Higher Risk with Multiple Comorbidities

Implemented Unit-Wound Program

Reinforced Wound Care Measures with Nursing

01/2010 (n=743)
02/2010 (n=618)
03/2010 (n=712)
04/2010 (n=545)
05/2010 (n=690)
06/2010 (n=687)
07/2010 (n=559)
08/2010 (n=646)
09/2010 (n=548)
10/2010 (n=580)
11/2010 (n=486)
12/2010 (n=544)
01/2011 (n=558)
02/2011 (n=502)
Next Steps

Heel Protectors: Mepilex dressings pilot proved to be beneficial and positive to patients. Implement use of routine use of new product in calendar Q1 2011.

New Mattresses: Request purchase of additional Fitzsimmons mattresses during next fiscal budget cycle.

Work with Information Systems to incorporate better electronic documentation of active intervention and preventative measures completed on patients so the care team can review what has been done and progress of the patients.

Develop an educational pamphlet for patients and families on pressure ulcers.

Revise staff education in E-learning on pressure ulcers.
Target 100% in Acute Myocardial Care

Team Members: B. Majcher, APRN, C. Mulhall, APRN, M. Jarotkiewicz, MS, Executive Director of the CV Service Line, D. Wilber, MD, FAHA, FACC, Cardiology Director, Cardiovascular Institute Division Director, Cardiology Medical Director, Clinical Electrophysiology, K. McLean, MD, Co-Director Cardiovascular Disease Fellowship Program, M. Cichon, MD, Director of Emergency Medicine, F. Leya, MD, Director of Cardiac Cath Lab, J. Lopez, MD, Director of Interventional Cardiology Research, Michelle Fennessy, APRN, Nursing Staff or 3 NEWS, 5 Tower, CCU, HTU, Emergency Department, Cardiac Cath Lab, Medical Records Department, IT Department, and Center for Clinical Effectiveness.
Background

• Since May 2002 LUMC has been reporting performance on AMI Patients for Core Measures.
• These Core Measures, developed by the Joint Commission and the Center for Medicare and Medicaid Services (CMS), examine the care of all AMI patients.
• The Core Measures are based on guidelines established by the American Heart Association (AHA) and the American College of Cardiology (ACC).
Project Aim

To achieve top performer status in the treatment of ST elevated Myocardial Infarction (STEMI) or left bundle branch patients as measured by a composite score at the end of year 2011.
Solutions Implemented

• In March 2009, LUMC announced, Heart Attack Rapid Response Team (HARRT)
• Monthly STEMI committee meetings to review all STEMI cases, a process to find ways to improve the care of the AMI patient; and to use this review process to acknowledge when things are done well.
• The ED has ongoing training with local municipalities to help interpret STEMI cases in the field.
Solutions Implemented

- Annually educate physicians on the components of the AMI Core Measures data.
- Developed *outlier reports* in order to improve and inform each physician on corrections to be made.
- September 2009 began a daily review of all inpatient elevated troponin levels within the LUMC system.
- On discharge each AMI patient’s chart and discharge summary has been reviewed and assessed by APRN for accurate documentation of AMI information and discharge medications.
Solutions Implemented

- Physician review is included on all expired patients or when documentation is unclear.
- Report quarterly to the Nursing Quality & Safety Council on AMI core measure outcomes.
- Monitored the core measure data point, Statin Therapy at Discharge, since January 2010; as of Quarter 4 2010 this is now a Core Measure data point.
Core Measures
Acute Myocardial Infarction Composite Score

Month

UCL = 0.0
Mean = 99.0
LCL = 91.5

Jan 2009 (n=14)
Feb 2009 (n=12)
Mar 2009 (n=15)
Apr 2009 (n=16)
May 2009 (n=19)
Jun 2009 (n=16)
Jul 2009 (n=16)
Aug 2009 (n=12)
Sep 2009 (n=14)
Oct 2009 (n=12)
Nov 2009 (n=14)
Dec 2009 (n=15)
Jan 2010 (n=12)
Feb 2010 (n=14)
Mar 2010 (n=24)
Apr 2010 (n=19)
May 2010 (n=28)
Jun 2010 (n=15)
Jul 2010 (n=25)
Aug 2010 (n=18)
Sep 2010 (n=17)
Oct 2010 (n=16)
Nov 2010 (n=19)
Dec 2010 (n=21)
Acute Myocardial Infarction Patients Receiving Statin Prescription at Discharge

Month

Oct 2010 (n=14)  Nov 2010 (n=15)  Dec 2010 (n=15)

Percent

0  20  40  60  80  100
Data Analysis

- In September 2009, the AMI composite score (all AMI patients receiving all indicated care) was 92.6%.
- As of October 2010 our composite score is 99%
- Since July 2010 we have been 100% we have been 100% in all measures including Statin therapy at discharge, which became a Core Measure Data point as of Quarter 4, 2010.
- Since September 2009 we have had only two cases when a medication, beta blocker, was not prescribed at discharge.
Next Steps

• Continue monthly STEMI meetings to evaluate the processes and address areas where delay occur.

• Continue Annual meetings with the physicians to educate them on Core Measure data points.

• Continue monitoring AMI patients receiving statin prescriptions at discharge.

• Educate nursing staff: schedule Bi-annual meetings to educate the Nursing Staff on 5 Tower and 3 NEWS on Core Measure Data points for the AMI patient’s.

• Daily chart review of all AMI patients.

• Maintain open communication with physicians to ensure proper AMI care is being delivered to the patient’s.

• On a daily basis review the inpatient Troponin list.

• Timely completion of discharge summaries to ensure that all medications are prescribed at discharge and appropriate documentation is completed when any of the medications are contraindicated.
APN Impact on Healthcare of Pediatric Surgery Patients with Gastrostomy Tubes

Sandra M. Weszelits MSN APN
Pediatric Surgery
Loretto A. Glynn MD
Medical Director, Pediatric Surgery
Timothy P. O’Hern MHA, CMPE
Director of Administration, Department of Surgery
Purpose

Identify impact of an APN clinic in streamlining care across the continuum and patient access to healthcare within Pediatric Surgery.
Role of APN

Advance Practice Nurses see new and return patients within their expertise. These patients may be in clinic for wound assessment and treatment, gastrostomy tube maintenance, preoperative and postoperative assessment and teaching along with routine assessments in care.
**Background**

- APN clinics offer access to quality care through scheduled clinic hours along with additional clinic hours to prevent ER visits through patient triage.

- APN clinics offer quality care to patients allowing patients to be seen in a timely manner along with increasing patient visits within the Pediatric Surgery Service.

- APN clinics offer a variety of quality services through their expertise and cost savings by preventing ER visits.
AIM Statement

- Decrease ER visits by 50% for pediatric surgery patients with gastrostomy issues by having them seen in the APN clinic by December, 2010.
Improvements to Care

- Leadership support provided by L. Glynn, M.D. and T. O’Hern.
- Clinic visits were offered to decrease Emergency Department visits through patient triage.
- Parents educated regarding process of who to contact with issues regarding the gastrostomy tube.
- Pediatric Grand Rounds: Presentations to attendings and residents regarding APN clinic and gastrostomy tube care.
- Pediatric Surgery Team are notified when a Pediatric surgery patient with g tube issues presents to the Emergency Department.
71% of Pediatric Surgery Patients (N=17) with Gastrostomy Tube Issues Were Seen in the APN Clinic

- Patients seen in the Emergency Room during the day
- Patients seen in the Emergency Room after hours
- Patients triaged to APN clinic
Average Monthly Clinic Visits
12 Months Before and After APN added to Practice

18% increase

N=91  N=112

Pediatric Surgery Visits
- Before APN
- After APN
Analysis

- ED visits decreased by 71% (12 cases/year) surpassing the goal of 50% (8.5 cases/year).
- APN clinics increased overall patient volume by 18% within the Pediatric Surgery Clinic.
- When patients were triaged through the APN Clinic, 100% (n=12) of the patients were seen in the appropriate venue.
Next Steps

- Monitor continued increase in APN clinic visits and decrease ER visits by the end of FY 2011.
- Educate parents to contact Pediatric Surgery APN for problems with gastrostomy tubes during the weekdays to avoid ER visits.
- Increase Access to Care by providing same day clinic appointment when contacted.
Lean 3P
Patientcare Preparation Process
Operational Excellence
2011 Quality Fair Storyboard
What is 3P?

• A method for designing facility layouts that better meet Patient and Caregiver needs with improved Safety, Quality, Delivery and at Lower Total Cost

• A rapid cycle process that focuses on generating lots of ideas; with simultaneous input from all stakeholders up front for the layout of the Emergency Department

• A method to prioritize and rank the outcomes (layouts) relative to each other

• Trystorming and mockups of the preferred solutions
3P uses the Kaizen Team Method

Typical 3P Team is 5-8 Members

- Doctors
- Nurses
- Clinical Support Staff
- Design Engineers
- Construction Engineers
- Facilities/Maintenance
- Lean Leaders
- Patients
3P Considers 7 Flows

1. Flow of patients
2. Flow of clinicians
3. Flow of medications
4. Flow of supplies
5. Flow of equipment
6. Flow of information
7. Flow of process

Everything Flows Continuously!
3P Generates 12 Ideas

- Separate into sub-teams with all functions: Architects, Construction, Clinical, Facilities, Security, Administration
- Each team generates 6 layout ideas
- Each team evaluates & ranks each Layout per voting criteria
12 Ideas to Top 3

• Teams present each of the 12 Ideas
• Entire team evaluate then rank to determine the Top 3 layout ideas
• Similar ideas are consolidated to Final 2 layouts
Trystorming

- Full or half scale mock-ups of the final two layouts are built
- Team tests the 7 flows in each layout
- Team generates Spaghetti Diagrams of each layout
- Final layout is determined from Trystorming
Implementation
88% percent increase in patient contact time for a nurse
Nurse Savings: 1656 steps per patient; - 14 minutes per patient
Spaghetti Diagram – Level I Trauma

**Current State**

**Future State**

<table>
<thead>
<tr>
<th>Waste Reduction – Motion</th>
<th>Patient Care Technician</th>
<th>76% Reduction (656 ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nurse</td>
<td>86% Reduction (210 ft)</td>
</tr>
<tr>
<td></td>
<td>Respiratory Therapist</td>
<td>76% Reduction (667 ft)</td>
</tr>
</tbody>
</table>
Environmental Services
Patient Satisfaction

The “ENGAGE” Program

Team Members:
Nurse Manager Kathy Fujiu
ES Operations Manager Pam Merriweather
ES Training Manager Deborah Kvapil
ES First Shift Manager Gloria Johnson
Service Associate Doris Crockett

Sponsor: ES Director Stephen McCarthy
Aim Statement

The purpose of this initiative is to provide housekeeping services to Loyola inpatients that will influence their perception and satisfaction with room cleanliness.

Goal: To achieve 75% patient satisfaction on the monthly Environmental Services HCAHPS question by June 30, 2011.
**HCAHP Question**

**During this hospital stay, how often were your room and bathroom kept clean?**

- Always
- Usually
- Sometimes
- Never
Elements of the ENGAGE program

Three Touch Points on the day shift

1. Introduction: deliver amenity gift (tooth brush and tooth paste), schedule appointment to clean, fix any immediate needs
2. Return at appointed time to clean
3. Return in afternoon to tidy, replenishment supplies, pull trash

Great Service – tent card that describes what we do!

Easy Fix – one call, does it all!

White Board – ES Workers Name, who does it!
Implementing ENGAGE

6 NE Pilot – April to August 2010

- Created a partnership between Environmental Services and the 6 NE Nursing Staff
- Environmental Services staff education & Supervisor coaching included “scripts” for patient interactions
- Improvement noted in HCAHPS scores for room cleanliness and willingness to recommend

Presented to LUHS Quality & Patient Safety Committee

- Began spread to all units in September 2010
- Started from lowest scoring units to the highest
- Fully implemented on all inpatient units December 2010
Improved Avatar scores with ENGAGE

- Willingness to Recommend
- Cleanliness
- Linear (Cleanliness)

6 NE Pilot

Program Spread
2010 HCAHPS Patient Satisfaction: Cleanliness of the Room

Mean = 67.23

UCL = 76.76

LCL = 57.70

We attract, develop, and retain an inclusive team that will make a positive difference in others' lives.
Marketplace Comparison
Publicly Reported Scores April 2009-March 2010

HCAHPS - Room & Bath Kept Clean

U of I
U of C
Rush
NMH
LUMC

58 59 60 61 62 63 64 65 66 67 68
Summary

• Our physical environment will not change

• Personal interaction is critical

• “Engage” increases customer satisfaction – it changes the culture!
GI Laboratory
Lean Process Improvements
Impact on Patient Length of Stay

**Team Leadership:**
- Claus Fimmel, MD
- Rose Lach, RN, PhD
- Deb Kull, MBA
- John Zinkel, MS, BBA, RRT, RCP
- Carmen Acevedo

**Team Membership:**
- The GI Lab Staff and Physicians
Improvement Opportunity

The Value Stream Map

October of 2009; the GI lab used a Value Stream Map to highlight key improvement opportunities.

The Kaizen Road Map

Kaizen (continuous improvement) events were planned and conducted targeting those areas including work flow and 5s.

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>November 8-13, 2009</td>
<td>GI Pre/Post area 5s &amp; Standard Work</td>
</tr>
<tr>
<td>December 1-4, 2009</td>
<td>GI Supply area 5s &amp; Standard Work</td>
</tr>
<tr>
<td>December 14-18, 2009</td>
<td>GI Patient Check-in &amp; Scheduling Process Improvement</td>
</tr>
<tr>
<td>January 18-22, 2010</td>
<td>GI Procedure area 5s &amp; Standard Work</td>
</tr>
<tr>
<td>February 8-12, 2010</td>
<td>GI Nursing Station 5s</td>
</tr>
<tr>
<td>February 15-19, 2010</td>
<td>GI Physician Scheduling Process Improvement</td>
</tr>
<tr>
<td>March 22-26, 2010</td>
<td>GI Processing 5s</td>
</tr>
<tr>
<td>April 19-23, 2010</td>
<td>GI Fellow room 5s</td>
</tr>
</tbody>
</table>

At that time, patient length of stay averaged 207 minutes per patient!
Project Aim Statement

Utilize LEAN concepts to reduce patient length of stay in the GI Lab by 25% without additional capital or human resources.

Goals:
- Decrease patient length of stay by 25%
- No change in required human resources
- Sustain length of stay improvement utilizing standardized work and 5s
5S - Sort, Straighten, Shine, Standardize, Sustain

- Evaluated functional work areas
- Eliminated unnecessary items
- Established standard supply par levels
- A Standard Work Survey is done daily to sustain what was improved
Process Improvements & Standard Work

- Evaluated patient care areas
- Improved patient flow
- Defined standards in patient care bays & basic processing rooms

Patient Flow - Before

Patient Flow - After

Process: Post-Op

<table>
<thead>
<tr>
<th>Department: GI Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedure Nurse</td>
</tr>
<tr>
<td>1) Starts timer at last sedative dosing</td>
</tr>
<tr>
<td>- Timer located at foot of bed</td>
</tr>
<tr>
<td>- Press 'RESET' until display shows '00:00'</td>
</tr>
<tr>
<td>2) Brings pt to recovery</td>
</tr>
<tr>
<td>3) Gives report to Recovery RN</td>
</tr>
<tr>
<td>4) Connects pt to monitor for vitals</td>
</tr>
<tr>
<td>5) Instructs pt for positioning and pass air</td>
</tr>
<tr>
<td>6) Hands off pt to Recovery RN</td>
</tr>
</tbody>
</table>

Process Owner: Lynn Heicher
Revision Date: 11/13/09

Recovery Nurse
1) Takes vitals and performs pt assessment
2) Determines if pt is able to tolerate nourishment and pt vitals are stable
   - Informs MD if pt unable to tolerate food and/or change in pt status
3) Once pt is fully awake:
   - Assists pt in sitting upright position
   - Offers pt nourishment (e.g. juice, cookies) from RN Station
4) When appropriate, Recovery RN discontinues pt IV and monitor
5) Stops medication timer at foot of bed
6) Pages pt family for discharge instruction
7) Provides discharge instructions to family
8) Advises pt to change into clothes with family assistance
9) GI Physician confers with family regarding procedure
10) Obtains wheelchair and instructs family on discharge
11) Strips bed and places linens in soiled hamper
12) Disinfects bed, monitor and pt equipment (e.g. BP cuffs, cords)
    according to MFG guidelines
13) Pulls clean bed from recovery room
    - Pulls clean linen/towels/pt gown from linen cart
    - Places clean linens at foot of bed
    - Rolls bed to available Pre-Op room
    - Parks bed in designated parking slot
14) Makes bed using clean fitted sheet
    - Places clean top sheet/towel/pt gown at foot of bed

JIT Inventory
1) RN determines inventory needs for assigned rooms
   - Use Post-Op room inventory sheet for par levels
2) RN gives Post-Op room inventory sheet with re-stock need to Charge Nurse
3) Charge Nurse assigns person to pull inventory
4) Charge Nurse calls Materials Mgmt for out of stock items
5) Assigned person delivers inventory to RN for re-stock of rooms
Collected Real Time Patient Data

This data enabled us to:

- Evaluate patient flow through the process
- See how long/often patients had to wait for a room
- Track Department performance to schedule
- Identify delays experienced by the patient
- Track the total time patients spent “moving through the process”

Data was manually collected

Data was then analyzed over time to evaluate effectiveness of the new process
Sustaining Improvement

25% Sustained Reduction in Patient Length of Stay!
Patient name concealed for privacy
Next Steps

Continue Improvement Initiatives

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anesthesia (pre)</td>
<td>March 28, 2011</td>
</tr>
<tr>
<td>Anesthesia (post)</td>
<td>TBD</td>
</tr>
<tr>
<td>Scheduling</td>
<td>May 23, 2011</td>
</tr>
<tr>
<td>Nurse and Technician Work Flow</td>
<td>June 6, 2011</td>
</tr>
<tr>
<td>Front Desk and Check-in</td>
<td>July 2011</td>
</tr>
<tr>
<td>Operating Policies and Procedures</td>
<td>August 2011</td>
</tr>
<tr>
<td>Consult Services</td>
<td>TBD</td>
</tr>
<tr>
<td>Anesthesia</td>
<td>TBD</td>
</tr>
<tr>
<td>Fluoro Procedure Room (new fluoro first-old fluoro room second)</td>
<td>August 2011</td>
</tr>
</tbody>
</table>
Recycling one ton of paper saves 17 mature trees, 7,000 gallons of water, 3 cu. yards of landfill space, 2 barrels of oil, and 4,100 kilowatt-hours of electricity—enough energy to power the average American home for five months.
(Source: EPA, 2008).
Team Membership

- Dyan Doughty, EH&S
- Dave Niksic, PP&G
- Nora Plunkett, Media Relations
- Pam Merriweather, Housekeeping
- Lorraine Fidonik, EMS
- Green Team members at-large

- Nursing
  - Nancy Madsen, Medical Records
  - Deborah Jasovsky, Administration
  - Christa Garza, PICU
  - Kelly Krause, PICU
  - Linda Chadwick, Neuro Clinic
  - Mary Foley, 6NE
  - Pat Murray, Hi-Dose
  - Alison McSweeney, MICU
  - Adalia Beatingo, 2 APPP
  - Lauren Jefferies-Zeitler, Apheresis
  - Lauren Ellsworth, L&D
  - Bessie Yang 4T
  - Judy Jelinek, OP Surgery Clinic
The World Health Organization estimates that 1/4th of global disease is currently caused by environmental exposures and risks that could be avoided.

Diseases which have been linked to the environment include asthma, leukemia, Parkinson’s disease, emphysema, birth defects, heart disease & infectious disease.

A nurse’s patient’s concern for their disease being related to living near a landfill acted as a catalyst to form the “Green Team”.

The Green Team became a standing committee for the Magnet Ambassador Group; with first team meeting October, 2008.

Physical Plant & Grounds was being required to shut down the incinerator by 2010.
Project Aim Statement

- Increase amount of recycled paper by 25% in 2009 & 50% in 2010 fiscal year
- Increase the amount of co-mingled recyclables by 50%
- Decrease the amount of landfill used for recyclable paper & comingled recyclables by 35%
Major Solutions Implemented

- October 2008: Green Team Committee formed
- January 2009: Filmed Flat Screen informational video on recycling/grey bin practice at Loyola
- June 2009: Green Team Mission and Goals approved
- September 2009: Loyola Recycle Policy Approved
- March 2010: OR recycling initiative started
Major Solutions Implemented

- September 2010: Nursing Survey
- October 2010: Virtual Poster presented at National Magnet Conference in Phoenix, AZ
- October 2010: Housekeeping Contract goes into effect – housekeeping educated on new recycling component.
- October 2008 – Present: Presentations throughout LUMC campus on Green Team efforts
Loyola employees increased the amount co-mingled recyclables by 55% in 2009 and by 64% in 2010.
Loyola employees increased the amount recyclable paper by 44% in 2009 and by 52% in 2010.
Cubic Yards of Landfill Saved
Since Inception of Green Team October 2008

Recycling efforts by Loyola employees saved cubic yards of landfill by 31% in 2009 and 41% in 2010
87%
Confidential papers are shredded or placed in grey bins

Pilot Nursing Survey September 2010

<table>
<thead>
<tr>
<th>Question</th>
<th>Percent of Positive Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confidential papers shredded or in grey bin</td>
<td>87</td>
</tr>
<tr>
<td>Knowledge of what can be recycled</td>
<td>58</td>
</tr>
<tr>
<td>Convenience to recycle</td>
<td>57</td>
</tr>
<tr>
<td>How often recyclable items get recycled in your department</td>
<td>45</td>
</tr>
</tbody>
</table>
Analysis

- Increased overall recycled shredded paper 52%. *Surpassed goal of 50%.*
- Increased co-mingled recyclable materials by 64%. *Surpassed goal of 50%.*
- Saved 2745 total cubic yards of landfill, an increase of 41%. *Surpassed goal of 35%.*
- Pilot nursing survey demonstrated that nurses surveyed protect pt safety through proper disposal of paper 87% of the time and they know what can be recycled 58% of the time.
Next Steps

- Increase number of grey bins available
- Work with Housekeeping on the following:
  - timely emptying of recycle bins
  - education for housekeeping staff to ensure compliance with the policy and contract
- Continue effort to increase hospital compliance with the recycling/grey bin policy
- Work to increase knowledge of recycling/grey bin policy throughout Loyola campus
- Green Team representatives continue to educate nursing on the Recycling/Grey bin policy
- Implement the addition of recycling bins to classrooms
Green Light Project

- Sue Elizalde RN, Assistant Manager OR
  - Holly Fosberg RN, OR
- Michele Huguley RN, PAHR/Case Manager
  - Cheryl Kaberna RN, SAC
- Jeanne Keane RN, Manager SAC/PACU
- Michael O’Rourke MD, Anesthesiology
  - Sherry Ragusa RN, PACU
  - Kim Reeks RN Manager 4ICU
- Dana Trakas RN Perioperative RN Liaison
  - Karen Zabel RN SAC
Opportunity Statement

The Green Light Project was created in October 2009 to improve documentation of the vital pieces of the Universal Protocol by the surgical staff.

Our goal is to ensure that the correct patient, correct procedure, and correct surgical site is verified on all surgical patients in the Main Operating Rooms.

“Wrong-patient, Wrong-procedure, Wrong-site surgery remains one of the top three reportable sentinel events to The Joint Commission since 2004.” Source: www.jointcommission.org/assets/1/18/SE_Data_Summary_4Q_2010_(v2).pdf
AIM Statement

• Improve accuracy of clinical documentation of all scheduled OR cases in main OR by 80% in third quarter 2010 with a stretch goal of 90%.

• Measurements include proper identification of patient, H & P completed and validated, accurate site marking, and completed surgical consents.
Solutions Implemented

- Identified the problem
- Formed a task force
- Reviewed baseline data
- Identified five measures for performance outcome
- Implemented EPIC changes
- Added components to PRE-OP checklist
- Educated staff on GREEN LIGHT PROJECT
- Hard stopped placed in SAC and PRE-OP
- Ensure completion of safety measures
Met initial goal of 80% and bypassed our stretch goal of 90% by Q3 2010

Project Green Light: Composite

**Individuals**

Temporary: \( UCL = 98.65, \text{Mean} = 90.22, \text{LCL} = 81.79 \) (mR=2)

**Graph Details**

- **October 2009** (N=617)
- **November 2009** (N=589)
- **December 2009** (N=609)
- **January 2010** (N=621)
- **February 2010** (N=569)
- **March 2010** (N=715)
- **April 2010** (N=682)
- **May 2010** (N=617)
- **June 2010** (N=692)
- **July 2010** (N=659)
- **August 2010** (N=652)
- **September 2010** (N=607)
- **October 2010** (N=624)
- **November 2010** (N=647)
- **December 2010** (N=638)
- **January 2011** (N=614)

- **Project Task Force**
  - Formed 11/2009
  - Hard stops in SAC
  - Education of staff 12/2009

- **Implemented checklist for data collection** 1/2010

- **Revised pre-op checklist** 3/2010

- **Revised Universal Protocol Policy** 8/2010

- **Re-educated OR RN’s** 5/2010

- **Target**
  - **Mean**
  - **UCL**
  - **LCL**
Analysis

- Initial composite score of 65%
- Exceeded initial goal of 80% in December 2009
- Surpassed stretch goal of 90% by Q3 2010
- Overall mean composite score is 90%
- Worked: Continuity and staff education
- Created easy icon identifiers via epic to recognize what is needed on the pre-op checklist
- Identifying trends regarding compliance as opportunities for improvement
Next Steps

- Drill down outliers regarding surgeon compliance, H & P validation, and surgical consents
- Educate physicians on compliance issues
- Share results with key stakeholders
- Increase target to 95% by Q4 2011
HEART FAILURE
INPATIENT DISCHARGE INSTRUCTIONS

TEAM MEMBERSHIP
DEPARTMENTS OF CARDIOLOGY, CARDIOVASCULAR SURGERY, MEDICINE, NURSING, THE CENTER FOR CLINICAL EFFECTIVENESS, MEDICAL RECORDS, INFORMATION TECHNOLOGIES/EPIC, CLINICAL DOCUMENTATION IMPROVEMENT

PROJECT COORDINATOR
COLLEEN JENSEN MHSA/MPH, RN
AIM STATEMENT

Achieve and sustain 100% compliance in providing Heart Failure patients with complete written discharge instructions covering all of the following:

• Diet
• Activity
• Medications
• Weight Monitoring
• What to do if Heart Failure Symptoms Worsen
• Follow-up
SOLUTIONS IMPLEMENTED

❤ Incorporated discharge instructions regarding weight monitoring and what to do if heart failure symptoms worsen into the Epic discharge instruction report (March/April 2010)

❤ Standardized nursing “smart text” for documentation of heart failure patient education across 3NEWS, 5TOWER, and 3 HTU/CCU (April 2010)

❤ Review of Medicare patient charts to assist nursing staff in real time identification of patients who may be part of the Heart Failure Core Measure population (February 2011)

❤ Incorporated a “hard stop” into all Discharge Order sets to make “diet” and “activity” required discharge orders that translate to the written Patient Discharge Instructions (March 2011)
Heart Failure Patients Receiving Complete Discharge Instructions Prior to Discharge

Change in Heart Failure documentation requirements

Definition: HF patients with documentation that they or a caregiver received discharge instructions (weight monitoring, what to do if heart failure symptoms worsen, diet, medications, activity level, follow-up appointment) prior to hospital discharge / HF patients discharged to home.

Data Source: Original data extracted from LUMC charts by RNs.

Analysis: Discharge instructions regarding diet and medications after discharge are the current drivers of outliers.
Heart Failure Patients Receiving Complete Discharge Instructions Prior to Discharge

Definition: HF patients with documentation that they or a caregiver received discharge instructions (weight monitoring, what to do if heart failure symptoms worsen, diet, medications, activity level, follow-up appointment) prior to hospital discharge / HF patients discharged to home.

Data Source: Original data extracted from LUMC charts by RNs.

Analysis: This graph highlights performance for each of the six discharge components which shows diet to be a main driver of outliers.
NEXT STEPS

❤️ Work with nursing education department and Epic personnel to incorporate heart failure discharge instructions into the Epic education module in the next 6 months

❤️ Continue to provide outlier feedback and education to physicians, nurses, nurse managers, and clinical educators

❤️ Continue to present Core Measure Data at Nursing Quality and Safety Council meetings Quarterly
Am I Blue??

Identifying Patients at Risk for SUICIDE

NPSG #15: “The organization identifies safety risks inherent in its patient population”
The Team

Mary Altier  RN, MSN, CPHQ
Margaret Bauschard RN, BSN
Sharon Bird RN
Maureen Davey RN
Mary Kenny RN, MSN
Carol Kohlsaat RN, BSN
Cathy Lenz RN, MS
Carol McDonald RN, BSN
Michelle Ruther RN, TNS
Carol Schleffendorf  RN, MS, NE-BC
Why you ask?

- Suicide in hospital setting = a sentinel event
- Protect patients who are risk for suicide
- Ensure compliance with the Joint Commission #15 NPSG

End Goal:
Identify patients who are at risk for suicide
What is the Aim of this work?

- The SMART approach:
  - Screening at risk populations
    - Out patient psychiatry patients
    - ED patients with suicide attempt or depression
    - Mothers at 28 weeks gestation
    - Newly delivered mothers prior to discharge AND
      - 2 weeks post delivery if c-section or
      - 6 week post partum check up
The Goal

↑ compliance for screening patients

at

RISK!
What did it take?

- Establish reporting metrics
- Establish reporting deadlines
- Submit monthly data → CCE
- Submit monthly metric report → Task Force
- Quarterly meeting of Task Force
- Joint Commission Periodic Performance Review
- Update Psychiatry brochures/Suicide Hotline number
Pause and Ponder!

**What worked well:**
- New sampling/audit tool implemented in March, 2011
  - ↑ compliance for case review
  - ↓ review time for staff

**Opportunities:**
- Outliers reviewed monthly
- EPDS incorporated into HUGS (Honoring Unspoken Grief) for mothers who experience miscarriage

Overall Compliance 95%
**Suicide Risk Assessment**

**Oak Brook Terrace**

**Definition:** Percent of delivered patients who were screened during their 2 week or 6 week post partum visit using the EPDS tool.

**Data:** Abstracted by RN

**Analysis:** Patients were screened 98% of the time. Screening compliance meets goal of 90%. New screening guidelines implemented with March 2010 cases.
**Suicide Risk Assessment**

**Emergency Department**

**Definition:** Percent of patients seen in the Emergency Department with a diagnosis of depression who had a Suicide Risk Assessment completed.

**Data Abstraction:** Data abstracted by RN.

**Analysis:** SRA completed on patients meeting criteria with 94 percent compliance overall, consistently above target of 90%.
Definition: Percent of patients seen in the Department of Psychiatry with a diagnosis of depression who had a Suicide Risk Assessment completed.

Data Abstraction: Data abstracted by RN.

Analysis: SRA completed on patients meeting criteria with 98 percent compliance, consistently above target of 90%.
Suicide Risk Assessment
Inpatient Obstetrics

**Definition:** Percent of delivered patients who were screened during their inpatient post-partum stay using the EPDS tool/total of delivered patients.

**Data:** abstracted from EPIC report

**Analysis:** Patients were screened 96% of the time. Screening compliance meets or exceeds goal of 90%.
**Definition:** Percent of delivered patients who were screened during their third trimester, 2 week or 6 week post partum visit using the EPDS tool.

**Data:** Abstracted by RN

**Analysis:** Patients were screened 95% of the time.
**Definition:** Percent of delivered patients who were screened during their 2 week or 6 week post partum visit using the EPDS tool.

**Data:** Abstracted by RN

**Analysis:** Patients were screened on average 89% of the time. Screening compliance has improved with new screening guidelines. 100% compliance for last 12 months.
**Definition:** Percent of at risk patients who had a suicide risk assessment done. Departments included: Emergency Room, In-patient Obstetrics, Psychiatry, North Riverside, Oak Brook, LOC.

**Data:** Abstracted by RN’s

**Analysis:** Patients were screened 95% of the time. Screening compliance exceeds goal of 90%.
Looking Ahead

- New Target 98%
- Stretch Goal 100%
- Continue to monitor outliers
- Expand risk assessment to Medical/Surgical Departments
Implementation of Clostridium difficile PCR Testing

Improvement in Turn Around Time –
Increased Sensitivity – Shorter Patient Isolations Times

Team Members: Sandra Chakonas Laboratory Manager, Paul Schreckenberger Ph.D Director Microbiology, Jorge P. Parada MD, MPH Director Infection Prevention, Angela DeBoo MT(ASCP), Violeta Rekasius MT(ASCP), Gigi Marinakos Trulis Infection Prevention and Jeanne Von Rentzell MT(ASCP)
Opportunity Statement

Clostridium difficile is a gram positive spore forming anaerobic bacillus that is responsible for causing diarrhea to severe life threatening pseudomembranous colitis when the normal bowel flora is compromised.

- Decrease Turn Around Time (TAT) for C. difficile toxin testing
- Increase the sensitivity for the detection of patients with C. difficile toxin infections
- Decrease hospital wide C. difficile isolation days
- Decrease C. difficile associated LOS & costs
Solutions Implemented

- Replaced the C. difficile toxin testing by EIA with the PCR method July 2010

- Expanded frequency of testing on demand 7 days per week, two shifts, from batch mode once per day only on 1st shift Mon-Sat.

- Educated staff about improved sensitivity of C. difficile PCR test
Comparison of Turnaround Time for C. difficile toxin by Enzyme Immunoassay versus C. difficile by PCR

Graph 1

C. difficile EIA
TAT 909 minutes

C. difficile PCR
TAT 93 minutes
Comparison of Positive Rate of C. difficile EIA and C. difficile PCR Toxin Testing

Positive Detection Rate For EIA 12.2%

Positive Detection Rate For PCR 19.7%
Pre Cdiff PCR Testing
3.56 Isolation Days

Post Cdiff PCR Testing
1.36 Isolation Days
Data Analysis & Results

- The mean turn around time for C. difficile testing has dropped 90%
  - EIA = 909 min (15 hrs) vs. PCR = 93 min (1.5 hrs)

- C. difficile PCR assay detected 75% more positives
  - EIA = 11% vs. PCR = 19%

- The repeat rate (multiple orders) for C. difficile toxin tests has decreased by 47%
  - EIA = 27% vs. PCR = 12.7%

- There was a 64% reduction in C. difficile hospital wide isolation days
Next Steps

- Collaborate with Infection Prevention and Control Program to implement an Epic Best Practice alert/hard stop to further decrease multiple orders for C. difficile PCR testing.
- Calculate the impact of C. difficile PCR testing on the average length of stay (LOS) for patients tested for C. difficile
  - A 2/3rd decrease in isolation days should be associated with lower LOS
- Calculate savings associated with shorter LOS
The Cepheid GeneXpert® System
Implementing a Blood Management Program

The Loyola Blood Management Steering Committee

Catherine Shipp, Colleen Jarosz, Phillip DeChristopher, Steven Edelstein, George Krempel, Paula Hindle
Background

Transfusion therapy is not without risks and the potential for injury to patients. Blood Management is an evidence based, multidisciplinary approach to appropriate blood use throughout the organization. The goal is to provide high quality appropriate patient care, ensure the safe & efficient use of all resources associated with blood transfusion while containing costs.
Aim Statement

• To establish a Blood Management Program that will:
  ➢ Increase blood management awareness & education
  ➢ Reduce the number & volume of laboratory draws in critical care units
  ➢ Provide point-of-care testing in the operating room to provide actionable intelligence for appropriate transfusion decisions
  ➢ Involve a member of the Loyola Blood Usage Committee on the P&T committee
  ➢ Improve blood bank operations
  ➢ Implement a transfusion safety officer
Blood Management Timeline

**2007**
- 2007 the Loyola Blood Usage Committee began the process of “Blood Management” at LUMC with several focused projects
  - Revision of Evidence Based Guidelines for Transfusion Therapy
  - Nursing, Physician & Medical Student education including web-based e-Learning modules
  - Development of new dosing strategies (“Adult Dose”) for Platelets & Cryoprecipitate to decrease waste, decrease unnecessary donor exposure and decrease expense

**2008**
- 2008 Loyola engaged Strategic Healthcare Group, LLC
  - November – conducted a 4 day on-site audit including interviews, chart review and direct observations
  - Reported findings included:
    - Blood Utilization Trends
    - Benchmarking
    - Blood Utilization Oversight
    - Blood Bank Operations
    - Nursing Practices
    - A Blood Management survey of Physicians, Nurses & Blood Bank Medical Technologists
    - Blood Management Systems
    - Pharmaceuticals

**2009**
- 2009 Blood Management Implementation Workshop
  - February 2009 full day multidisciplinary meeting with 50 attendees including physicians, nurses, medical technologists and administrators.
  - Each workgroup prioritized the 22 recommendations for implementation.
Accomplishments ~ to date . . .

- Evidence based transfusion guidelines and blood management information provided to housestaff as a pocket guide – also available “on-line”
- Provided nursing staff E-Learning modules – “Blood Transfusion Procedures” & “Suspected Transfusion Reactions”
- Transfusion Consent revised and added documents for Transfusion Refusal & Transfusion Limitations, all available “on-line” and through the EMR
Accomplishments ~ to date . . .

• Pilot of PlateletWorks (a point of care instrument) in the OR with 50 patients
• Reduced blood usage in 2 main component groups – Red Blood Cells & Platelets
• Reduced “wasted” products
• Transfusion Safety Officer position approved and filled
• Expense reduction FY09 – FY10 $426,156
Cryoprecipitate Waste

Wasted Products - Cryo - Number of Products

Blood Management Implementation Workshop 2/13/2009
Plasma Waste

Wasted Products - Plasma - Number of Products

Blood Management Implementation Workshop 2/13/2009
Next Steps

- Sustain the gains
- Expand Cell Salvage operations in the OR
- Investigate other opportunities for Point-of-Care Testing
- Evaluate opportunities for pre-operative anemia management in elective surgical cases
- Develop patient education materials related to blood donation, blood transfusion and informed consent
Implementing Team Strategies for the Reduction of Ventilator Associated Pneumonia (VAP) in the MICU

• Dan Dilling, MD, Medical Director MICU
• Barb Pudelek, RN, Manager MICU
• Rose Lach, PhD, RN, Administrative Director
• MICU Clinical Team (nursing staff, residents, respiratory care, clinical pharmacist)
• Emi Pua RN, Infection Control Practitioner
• Michael Wall PharmD, MBA, Director Quality Measurement, Center for Clinical Effectiveness
Background

• VAP is a common nosocomial infection in critically ill patients and is associated with poor outcomes, increased length of stay, increased cost, and increased mortality. It is the leading cause of death among nosocomial infections (Wip & Napolitono, 2009). Evidence-based prevention guidelines exist and are highly effective in reducing the occurrence of VAP but are often poorly implemented (American Thoracic Society, 2005).

• Although the MICU historically had a low VAP rate, the staff and clinical team were unaware of the compliance rate with the VAP bundle and if all elements of the VAP bundle were fully and accurately implemented (i.e. HOB elevation).
Aim Statement

• Increase clinical staff awareness of compliance rates with the VAP bundle by January 2011.
• Improve compliance with all elements of the VAP bundle to 95% by March 2011
• Increase compliance with and accuracy of HOB elevation of 30-45 degrees to 95% by January 2011.
• Reduce and sustain VAP rate to below the NHSN mean of 2.74 infections/100 vent days by June 2011.
Key Project Improvements Made

- Evaluated sources of data for compliance with VAP bundle and VAP rates. Worked with CCE to create a VAP bundle compliance report.
- Educated all clinical staff about the elements of the VAP bundle and posted reminders.
- Assessed the accuracy of HOB elevation and educated staff on the appropriate measure.
- Posted VAP bundle compliance rates.
HOB Elevation

• Keeping the HOB elevated 30-45 degrees is an important component of the VAP bundle and easily controlled by the nursing staff. However, not all beds have a mechanism to measure the degree of elevation. In an observational study we found that the HOB was not actually elevated 30 degrees or greater.
• We educated the staff on the importance of keeping the HOB elevated how to accurately measure the HOB elevation.
• Reminder signs are posted in the rooms of ventilated patients to encourage respiratory therapy, physicians, radiology technicians and nurses to elevate the HOB.
ANALYSIS: Prior to the education, the staff documented HOB elevation of 30 degrees but actual measurement revealed less than 30 degree elevation in 44% of the observations. After the staff were educated, HOB elevation greater than 30 degrees occurred in 65% of the observations.
VAP Bundle Compliance

- The VAP Bundle consists of 5 separate elements: Peptic ulcer prophylaxis, DVT prophylaxis, oral chlorhexadine, twice daily oral care, and HOB elevation 30-45 degrees.
- Of the 5 elements, 3 require physician orders for medications (PUD prophylaxis, anticoagulation, and chlorhexadine). Compliance with ordering the medications was low (57.4-82.5%). The nursing staff, clinical pharmacist and physicians worked together to improve compliance. The clinical pharmacist participates in rounds and plays an integral role in ordering the medications. In addition, reminder signs are also posted on the computers.
- Working with the Director Quality Measurement, a dynamic report was created and made available on the Reports Channel of the portal. This report allows for real-time monitoring of VAP bundle compliance.
Analysis: Compliance with the VAP Bundle has increased from 44% to 93%. Lack of compliance with any one of the 5 elements is considered a non-compliance for the entire day.
ANALYSIS: The VAP rate in MICU is consistently low with 0-1 occurrence per month however we remain above the NHSN pooled mean with a rate of 3.55. We strive to eliminate all preventable cases of VAP and therefore monitor our absolute VAP count in addition to the NHSN rate.
Analysis

- Although this project is still in the early phases, we have been able to demonstrate an improvement in HOB elevation 30-45 degrees, consistent compliance with oral care and use of chlorhexadine with oral care. By increasing awareness of the elements of the VAP bundle and partnering with the residents, our clinical pharmacist and respiratory care, we have demonstrated an improved compliance with the VAP bundle.
Next Steps

• Continue to post data on a monthly or weekly basis to increase awareness of compliance.
• Discuss compliance during morning and evening shift huddles and identify barriers.
• Identify staff nurse champions to assist in “real-time” monitoring and reinforcement of bundle elements and to overcome barriers.
• Add VAP Bundle elements to the MICU admission orders to improve compliance with ordering.
• Add 2 additional elements for monitoring: sedation vacation and daily weaning assessment as these are more strongly associated with reduction of ventilator days and VAP occurrence.
Improving Specimen Labeling

Team Members:
Clinical Laboratory: Colleen Jarosz, Laurie Gillard, Cathy Shipp
Nursing: Kathy Clancy, Julie Liberio, Patricia Parsons
September 2008 the American Hospital Association (AHA) recommended standardized colors for patient alert wristbands.

- Prior to this recommendation:
  - Hospitals used color-coded wristbands to communicate health care conditions
  - Each wristband color had a different meaning; not all hospitals used the same color to convey the same alert
Project Background

- The LUMC blood bank, at that time, had a separate red wristband for patients who potentially required a transfusion.
  ◦ According to the AHA, the red wrist band indicated the patient had allergies.
- In order to support the AHA efforts to standardize the colored wrist bands while at the same time, standardize the phlebotomy process for the clinical laboratories, a team was tasked with the elimination of the separate red band.

  ◦ “Greater standardization in care processes has been shown to lead to better outcomes” Dartmouth Atlas of Health Care
Aim Statement

To create a standardized phlebotomy process that will eliminate the use of the blood bank red wristbands and will reduce by 40% the number of nonconforming labeling events by December 2010.
What are *nonconforming* events?

- A specimen is NOT labeled
- A specimen label is incomplete (missing name, MRN, DOB)
- A specimen is mislabeled
- The requisition or transmittal do not match specimen label

Specimens in any of the above categories are usually discarded and the patient is credited for the tests ordered.

*Under special circumstances, the specimen may be relabeled*
The new policy was implemented July 2009.
The standardized process requires all specimens to have the following information on each specimen lab label:
- the phlebotomist’s initials
- employee number
- time of collection
The laboratory audited compliance for several months and provided feedback to the Nurse Managers.
The red band was officially eliminated in October 2009.
Guidelines for Labeling

Phlebotomist identifiers & time of collection

FIRST 5 DIGITS OF EMPLOYEE I.D. #, AFTER THE ZEROES
Data

Nonconforming Specimen Labels

- UCL = 146.21
- LCL = 54.92
- Mean = 100.57
- UCL = 106.17
- LCL = 27.01
- Mean = 66.59

Phlebotomy Process Standardized

Video "If You Drew It Then You Have To Put A Label On It" released
During FY10 there were approximately 720,000 patient draws, translating into 60,000 draws/month.

- The average number of nonconforming labeling events per month (prior to August 2009) was 115 (0.2% of patient draws)
- The average number of nonconforming specimen labels, August 2009 through December 2010, was 66 (0.1% of patient draws)

There was a 43% decrease in the number of nonconforming labeled specimens being sent to the clinical laboratories as a result of standardizing the phlebotomy process.
Additional Benefits of Standardized Phlebotomy

- Bar coded labels are more efficient and less error prone than using the separate red banding/R number system.
- Clinical Lab staff can now contact the phlebotomist directly if there is a labeling concern.
- Nurse Managers can directly address individuals involved in specimen collection concerns on their units.
Next Steps

- Develop an awareness campaign to improve compliance with specimen collection best practices
  - *If You Draw It, Put A Label On It Video*
- Explore the implementation of a bedside bar coding tool
- Continue to collaborate with nursing to improve education and training
Reducing Infusion Related Medication Errors

Team Members:
- Sara Linton-Beyer, PharmD.
- Ann Edlbauer, RN
- George Krempel, VP Health Care Services
- John Ilic, PharmD.
- Michelle Kudulis, RN
- Paula Hindle, VP/Chief Nurse Executive
Background

- Intravenous Infusion Medication Errors are one of the most common types of drug errors.
- 61% of the most serious and life-threatening potential adverse drug events are IV-drug-related.
- FY10 Goal by the Board Directors: Eliminate infusion related errors causing patient HARM to ZERO.

Problems Identified

- From October ’07 through June ’08: 23 infusion related medications errors were reported.
- Little standardization of drug infusion rates & concentrations among ICU’s.
- Inconsistency between rates & concentrations in the:
  - Parenteral Administration Guidelines
  - Electronic medical record (EMR)
  - Infusion Pump Libraries
PLAN:

1. Identified a project sponsor: Pharmacy and Therapeutics (P&T) Committee

2. Consulted ICU Attendings/Pharmacist
   - Standardization of:
     - Medications
     - Protocols
     - Order Sets

3. Benchmarked other Institution’s Practices
### Actions Taken

*Updated Pump Libraries: October 2009*

<table>
<thead>
<tr>
<th>Vecuronium</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>GUI DELI NES</td>
<td>mcg/kg/min</td>
<td>mcg/kg/min</td>
</tr>
<tr>
<td>EMR</td>
<td>mcg/kg/min</td>
<td>mcg/kg/min</td>
</tr>
<tr>
<td>PUMP LIBRARY</td>
<td>mcg/kg/hr</td>
<td>mcg/kg/min</td>
</tr>
<tr>
<td>CONC. GUI DELI NES</td>
<td>50mg/100ml</td>
<td>100mg/100ml</td>
</tr>
<tr>
<td></td>
<td>100mg/100ml</td>
<td>150mg/150ml</td>
</tr>
<tr>
<td>CONC. EMR</td>
<td>125mg/250ml</td>
<td>100mg/100ml</td>
</tr>
<tr>
<td></td>
<td>150mg/150ml</td>
<td>150mg/150ml</td>
</tr>
<tr>
<td>CONC. PUMP LIBRARY</td>
<td>150mg/150ml</td>
<td>100mg/100ml</td>
</tr>
<tr>
<td></td>
<td></td>
<td>150mg/150ml</td>
</tr>
</tbody>
</table>

Example of Pre and Post Implementation
# Actions Taken

*Updated Pump Libraries: October 2009*

<table>
<thead>
<tr>
<th>Epinephrine</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GUIDELINES</strong></td>
<td>mcg/kg/min</td>
<td>mcg/kg/min</td>
</tr>
<tr>
<td></td>
<td>mcg/min</td>
<td></td>
</tr>
<tr>
<td><strong>EMR</strong></td>
<td>mcg/ml</td>
<td>mcg/kg/min</td>
</tr>
<tr>
<td></td>
<td>mcg/kg/min</td>
<td></td>
</tr>
<tr>
<td><strong>PUMP LIBRARY</strong></td>
<td>mcg/min</td>
<td>mcg/kg/min</td>
</tr>
<tr>
<td><strong>CONC. GUIDELINES</strong></td>
<td>10mg/100ml</td>
<td>10mg/100ml</td>
</tr>
<tr>
<td></td>
<td>25mg/250ml</td>
<td>25mg/250ml</td>
</tr>
<tr>
<td><strong>CONC. EMR</strong></td>
<td>10mg/100ml</td>
<td>10mg/100ml</td>
</tr>
<tr>
<td></td>
<td>25mg/250ml</td>
<td>25mg/250ml</td>
</tr>
<tr>
<td><strong>CONC. PUMP LIBRARY</strong></td>
<td>8mg/250ml</td>
<td>10mg/100ml</td>
</tr>
<tr>
<td></td>
<td>16mg/250ml</td>
<td>25mg/250ml</td>
</tr>
</tbody>
</table>
Actions Taken

- Created Interdisciplinary Committee in October 2009
- IV Line Labels at distal and portal ends of the line
- Pilot of Line Reconciliation at shift change in 2ICU and 4 Tower
- Educated Nursing Staff---Mandatory Pump Training
- Ordered Pre-made Drips for standardization
Actions Taken

- Implemented Mandatory Dual sign-off in the Medical Administration Record (MAR) with Independent Double Checks
- Evaluation of new Smart Pump Technology
  - January 2011: Infusion Pump Trial
  - Over 170 staff analyzed 3 different pumps
NO Infusion errors causing harm for 14 months!

Infusion Errors Causing Harm

- Nov 09 - IV Line Labels at Distal & Portal Ends
- Feb 10 – Mandatory Nursing Marathon - Pump training
- Apr 10 – Pilot for line reconciliation At shift change 2ICU & 4ICU
- Oct 10 – Implementation of Mandatory Dual Sign-Off

Confidential: For Quality Improvement Purposes
Next Steps:

- Implementation of the new Smart Pump
- Continuously review reported medication errors on a monthly basis to identify improvement opportunities
Innovations in Leadership: Teamwork at it’s Best

Loyola University Health System, Maywood, IL
Loyola University Health System’s multidisciplinary program, “Innovations in Leadership” seeks to develop the capacity for change on our campus. Participants work as equals in leadership skill-building exercises for four weeks. They then identify a problem, related to patient care, to address and develop an application project that is shared with senior leadership.

Leadership requires learning to work within a team to reach a common objective.
Program Structure

The “Best of the Best”

24-30 participants are hand-selected by Senior administrators according to their reputation as a leader among their peer group

- Attending physicians
- Residents
- Staff Nurses
- Medical Students
- Nursing Students

Multidisciplinary Teams

Participants are assigned to four multidisciplinary teams

- Coaches are assigned to assist in the coordination and communication among team members.
## Seminar Sessions

<table>
<thead>
<tr>
<th>Session One</th>
<th>Personality Styles &amp; Leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Myers Briggs Type Indicator Assessment</td>
</tr>
<tr>
<td></td>
<td>• Identification of personal preferences in communication and adaptation of style to communicate with others</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Session Two</th>
<th>Communication Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Elements of difficult conversations</td>
</tr>
<tr>
<td></td>
<td>• Develop strategies for communicating well in difficult conversations</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Session Three</th>
<th>Leadership &amp; Values</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Jesuit leadership values</td>
</tr>
<tr>
<td></td>
<td>• Teams</td>
</tr>
<tr>
<td></td>
<td>Lean Management Principles</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Session Four</th>
<th>Implementing Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Rapid cycle improvement model group work</td>
</tr>
</tbody>
</table>
Application Projects

Each team is free to self-select a topic based on a concern raised among the team members
- LUHS Senior Leadership offers a list of potential project topics, including selected organizational priorities
- Organizational leaders meet with teams to guide their efforts
- Teams present their application projects to LUHS leadership at the conclusion of the 10 week course

Several course projects have been fully implemented or have guided significant organizational changes
## Projects Implemented

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What’s Up Doc? Standardizing Peri-operative Updates for Families (2010)</strong></td>
<td>Standardization of peri-operative communication with families</td>
</tr>
<tr>
<td><strong>“Time-Out or Get-Out”; Implementing the O.R. Surgical Checklist (2009)</strong></td>
<td>Implementation of the WHO surgical safety checklist</td>
</tr>
<tr>
<td><strong>Doctor Away: Strategies to Raise Awareness &amp; Improve Resource Utilization for Access to Care Program (2009)</strong></td>
<td>Improved resource utilization for treatment of lower back pain in underserved patients</td>
</tr>
<tr>
<td><strong>Treating the Spirit Starts With a Welcome (2008)</strong></td>
<td>Welcoming greeters/escorts at the main hospital entrance</td>
</tr>
<tr>
<td><strong>Do You Hear What I Hear? (2006)</strong></td>
<td>Improved awareness of needs and resources for non-English speaking patients and families</td>
</tr>
</tbody>
</table>
Overall Course Ratings

Overall Course Rating
1=Strongly Disagree 5 = Strongly Agree

Year
2004 2005 2006 2008 2009 2010
Score (5 point scale)
4.7 4.4 4.1 4.6 4.3 4.8
Impact in Practice

Will Change Some Aspect of Performance
1=Strongly Disagree 5 = Strongly Agree

Score (5 point scale)

<table>
<thead>
<tr>
<th>Year</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>4.8</td>
</tr>
<tr>
<td>2005</td>
<td>4.3</td>
</tr>
<tr>
<td>2006</td>
<td>3.8</td>
</tr>
<tr>
<td>2008</td>
<td>4.5</td>
</tr>
<tr>
<td>2009</td>
<td>4.0</td>
</tr>
<tr>
<td>2010</td>
<td>4.7</td>
</tr>
</tbody>
</table>
Lessons Learned

Identify a change you plan to make in your practice as a result of this course

“To realize that the team is the BEST asset”

“I will be more proactive about not just suggesting change, but helping lead it”

“I will be more open to the input of others”

“My method of working within a team or organizing group efforts will be influenced by this experience”

“Having the opportunity to work with people that I would never have the opportunity otherwise”
Teamwork will foster Professionalism

Loyola’s Innovations in Leadership program participants that have worked with organizational leaders learn that their change efforts are welcome. Similarly, organizational leaders have an opportunity to see grassroots multidisciplinary teams who are eager to contribute to quality improvement efforts.

Gaining faith in the ability of fellow learners to make important contributions to the team is our long-term goal.
Team Membership

Prem Batchu PT,DPT
Carolyn Murphy PT,DPT
Dana Fortado, Resource Clinician, OT
Teresa Olsen PT
Kelly Ortega, Senior Secretary
Stacy McNally SLP
Vivian Tyler, Clinical Coordinator, PT
# Opportunity Statement

## Kaizen Charter

### Inpatient Rehabilitation Services - Scheduling Process

**Start Date:** 26-Apr-10

### Reason for Action:

The scheduling process is critical for meeting therapists daily job expectations.

Standard terminology in multiple services lines is key to successful communication across disciplines to ensure timely patient care.

Although attempts to update the scheduling process have occurred in the past 8 years, the lack of standard work results in multiple forms of waste/miscommunication that impedes patient care and delivery on the Med/Surg team.

### Event Scope:

Scheduling process for med/surgery therapy orders

### Deliverables:

- Standardize all Med/Surg scheduling procedures for therapists
- Standardize terminology for scheduling on boards
- Standardize prioritization of patients

### Target State:

Scheduling processes for Med/Surg will be updated and standardized. Terminology for scheduling on boards will be standardized across all service lines.

Updating procedures for boards will be standardized across all service lines.

### Alignment with Pillars:

<table>
<thead>
<tr>
<th>Exceptional Care</th>
<th>Exceptional Service</th>
<th>Exceptional People</th>
<th>Growth</th>
<th>Financial Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>XX</td>
<td></td>
<td></td>
<td></td>
<td>XX</td>
</tr>
</tbody>
</table>

### Initial State:

Single staff member owned process

Time consuming process

Limited therapist autonomy leading to dissatisfaction

Reduced treatment time due to delay in scheduling

### Required Members:

**EXECUTIVE CHAMPIONS:** George Kremple

**SPONSORS:** Paul Gorski

**PROCESS OWNER:** Prem Batchu PT, DPT

**Lean SME:**

**FINANCE PARTNER:** N/A

**Location:** Inpatient Rehab Department Building 104, Rm 1352

** Kaizen Team:**

<table>
<thead>
<tr>
<th>Full time:</th>
<th>Dept. / Role</th>
<th>Ad Hoc:</th>
<th>Dept. / Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carolyn Murphy</td>
<td>Rehab PT</td>
<td>Paul Gorski</td>
<td>Administrative Director</td>
</tr>
<tr>
<td>Teresa Olsen</td>
<td>Med/Surg PT</td>
<td>Ewa Jaraczewska</td>
<td>Manager</td>
</tr>
<tr>
<td>Stacy Scarpetti</td>
<td>Med/SurgSLP</td>
<td>Dana Fortado</td>
<td>Resource Clinician/OT</td>
</tr>
<tr>
<td>Kelly Ortega</td>
<td>Administrative Secretary</td>
<td>Vivian Tyler</td>
<td>Clinical Coordinator/PT</td>
</tr>
</tbody>
</table>
Opportunity Statement

The scheduling process is critical for meeting therapists daily job expectations. Standard terminology in multiple services lines is key to successful communication across disciplines to ensure timely patient care.

Although attempts to update the scheduling process has occurred in the past 8 years, the lack of standard work results in multiple forms of waste/miscommunication that impedes patient care and delivery on the Med/Surg team.
AIM Statement

Improve patient care and ensure appropriate discharge planning goals are met for the patient by:

• *Standardizing terminology in multiple services lines*
• *Improving communication across disciplines*
• *Reducing errors between cross coverage staff*
• *Reducing extra steps to complete job*
• *Providing clinicians with autonomy of scheduling*

**Goals:**
• Decrease therapist wait time for daily schedule by 10% within one month of performing event.
• Increase therapist satisfaction scores by 5-10 points within 3 months of implementation of new standard work processes.
• Increase number of patients seen daily by ≥ 5% within 3 months of completion of event.
• Improve 5S score by 10 points within 3 months of completion of event.
• Clinicians will complete and pass competency for new layout of scheduling boards within 3 months of event to ensure adherence to standard work processes.
# Solutions Implemented: Phase 1

<table>
<thead>
<tr>
<th></th>
<th>Problem</th>
<th>Minimum Expectations</th>
<th>Lean Methodology</th>
<th>Start</th>
<th>End</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Layout of boards</td>
<td>• One board for each service line</td>
<td>Just Do It</td>
<td>4/26/10</td>
<td>4/26/10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Indication of therapist/frequency/priority</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Legibility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Assist with prioritization and communication between therapists</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Proper Use of Boards</td>
<td>• Standardization of prioritization of patients</td>
<td>Kaizen</td>
<td>5/10/10</td>
<td>5/14/10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Standardization of completing boards</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Workspace Flow</td>
<td>• Ease of accessibility to boards</td>
<td>5S</td>
<td>4/19/10</td>
<td>4/23/10 and ongoing audits</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Expedition of morning process</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Prevent crowding at boards</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Scheduling via Epic</td>
<td>Therapists able to see scheduled patients while on floors</td>
<td>Project</td>
<td>1/1/11</td>
<td>6/1/11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MD's/SW's able to access appropriate therapist</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Solutions Implemented: Phase 2

- Review standard work process for scheduling on boards. Present at team meeting.
- Create competency for boards. All staff to complete yearly.
- Review standard work process for scheduling on boards. Present at team meeting.
- Create standard work process for techs on how to assign patients when therapists call office.
- Create competency on boards for techs.
Results: 5S Workspace Flow

Spaghetti Diagrams

Pre-Event

Post-Event

Control State
## Results: 5S scores

<table>
<thead>
<tr>
<th></th>
<th>Pre Event</th>
<th>Post Event (1 month)</th>
<th>Control State (5 months)</th>
<th>Δ</th>
</tr>
</thead>
<tbody>
<tr>
<td>5S Score</td>
<td>1.4</td>
<td>4.16</td>
<td>4.20</td>
<td>2.8</td>
</tr>
<tr>
<td>Steps</td>
<td>77 steps</td>
<td>41 steps</td>
<td>43 steps</td>
<td>34</td>
</tr>
</tbody>
</table>
## Results

<table>
<thead>
<tr>
<th></th>
<th>Pre-Event</th>
<th>Post-Event</th>
<th>Control State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Therapists wait time</td>
<td>20 min</td>
<td>0-5 min</td>
<td>0 min</td>
</tr>
<tr>
<td>Therapists autonomy for pt treatment</td>
<td>50%</td>
<td>90%</td>
<td>95%</td>
</tr>
<tr>
<td>Number of patients seen per therapist per day</td>
<td>7.4</td>
<td>8.2</td>
<td>8.5</td>
</tr>
<tr>
<td>Therapist satisfaction scores</td>
<td>50-75%</td>
<td>90%</td>
<td>90%</td>
</tr>
<tr>
<td></td>
<td>Partially Satisfied</td>
<td>Highly satisfied</td>
<td>Highly satisfied</td>
</tr>
<tr>
<td>Increase in number of patients seen/day</td>
<td>13% (9-11 pts)</td>
<td>15% (13-15 Pts)</td>
<td></td>
</tr>
</tbody>
</table>
Analysis

Improvement noted in the following areas:

- Number of patients seen per day, 5S score, workspace flow, clinician satisfaction rates, and wait time for daily schedule.

Issues that were identified were corrected in Phase II of the event.
1. Development of a formal written competency
2. Re-inservicing the staff to improve pass rates/compliance
3. Standard work for scheduling on the boards was also revised to aid in determining patient needs for frequency of care.
4. Full-time clinicians were designated as leaders of their primary service line to aid in coverage for absent/off clinicians in order to ensure daily continuity of patient care.
5. Goals from the event were also implemented into Key Performance Indicator daily measures.
Next Steps

- Ongoing in-servicing of new and registry staff to improve successful adherence of standard work processes.
- Quarterly retroactive audit of scheduling boards to ensure adherence to standard work guidelines for prioritization of patients.
- Utilization of peer review as means to discuss appropriateness of current prioritization system.
- Bi-yearly assessment of work processes and areas for improvement in value stream map.
- Scheduling via Epic to enable therapists to see scheduled patients while on floors and allow MD's/SW's to access appropriate therapist.
TJC Readiness Education:

Project Team:
Nursing Quality & Safety Council
Aim Statement

- To educate nursing and ancillary staff throughout LUHS in preparation for the pending triennial Joint Commission (TJC) survey.

Goal:
- To implement educational activities and disseminate materials to ALL nursing and ancillary staff, on ALL shifts, at ALL LUHS sites:
  - National Patient Safety Goals
  - Compliance with clinical standards
Laying the Foundation

- Project planning began in November, 2009.
  - The Nursing Quality and Safety Council (NQSC) and a core group of Clinical Ladder Four nurses, in collaboration with the Center for Clinical Effectiveness (CCE), joined forces.
  - Education tools to be used:
    - Train the trainer lessons
    - Joint Commission Readiness website on loyola.wired
    - Posters, flyers, binders
The 2010 NPSG’s were divided into monthly topics

- Train-the-trainer lessons & education posters were presented by the CCE at monthly NQSC meetings
- NQSC members presented NPSG materials to their peers & returned attendance sheets to the council co-chairs
- The NPSG materials were also posted on the TJC Readiness website.
Issue: Compliance with Clinical Standards

- Nursing and ancillary direct care staff required education regarding the clinical standards
- Explored concept of an education cart, but recognized it would require an army of nurse volunteers to implement
- An alternate solution was developed – Joint Commission Education Binders
Solution: Joint Commission Education Binders

- **Binder Production & Distribution:**
  - Education material was divided into weekly lesson plans with a six-week cycle.
  - Content was reviewed and approved by the CCE.

- Eighty binders were assembled and distributed to all inpatient and ambulatory LUHS sites.

- A Team Member was assigned to each unit/department to facilitate education
  - Staff RNs earned clinical ladder points for educating their peers.
Collaboration was Key

- NQSC members brought questions and concerns posed by staff to the NQSC Council meetings.
- CCE staff clarified the information
  - Posted on the TJC Readiness website
  - Distributed through Magnet job code emails
  - Discussed at Nurse Manager and Magnet Council meetings.
Cumulative 2010 NPSG Lesson Participation

Participants

Jan-10
Feb-10
Mar-10
Apr-10
May-10
Jun-10
Jul-10
Aug-10
Sep-10
Oct-10
Results & Analysis

The October 2010 Joint Commission Survey was a great success, with NO NPSG findings in the inpatient and ambulatory areas!

- TJC educational materials were made available to ALL nursing and ancillary staff, on ALL shifts, at ALL LUHS sites via train-the-trainer lessons, TJC Education binders, and the TJC Readiness website.
- Train-the-trainer lessons led to 1,963 educational encounters with direct care nursing and ancillary staff.
- Making education convenient and available to all staff, in all settings, on all shifts is an effective method of communication, which will be utilized for future mass-readiness campaigns.
Collaborative Effort with these Team Members:

- **Kristine Bisset**, Coordinator Hospital Customer Service
- **Steven Edelstein**, MD, Professor, Vice Chairman Anesthesiology
- **Christine Jeffries**, MBA, Manager, Hospital Guest Services
- **Lucy Spada**, Administrative Assistant, Surgical Services
- **Sandra Swanson**, Administrative Director, Surgical Services
- **Dana Trakas**, RN, Perioperative Nurse Liaison
- **Stephanie Wolski**, RN, CNOR
Opportunity Statement

An opportunity exists to improve customer satisfaction during the intra-operative experience at Loyola by improving communications in the Surgical Waiting Room.

Apprehension and anxiety characterize the families as they wait for information regarding their patient’s progress through the surgical process. Innovations in Leadership identified deficiencies and inconsistencies in communication processes designed to keep the family informed and were targeted for improvement and standardization.
AIM Statement

1. Increase the number of surgeon / family post surgical conversations that occur in a private consultation room by the attending surgeon.

2. Improve patient and family satisfaction related to communication enhancements in the Surgical Waiting Room.
Solutions Implemented

Support from surgical leadership resulted in 3 improvements:

- Information brochure developed and distributed to families on day of surgery to improve and standardize pre-op information and to provide answers to common questions.

- Data regarding communication patterns between surgeons and families is collected and
  - posted in physician lounge
  - published on OR/PAR Intranet website
  - presented at OR/PAR committee and emailed monthly to Chairman of each surgical service.

- In-house use of pagers implemented to
  - allow families’ greater mobility from the Surgical Waiting Room and to
  - quickly locate family members to communicate updates regarding patient progress.
**Results**

**Aim #1:** Increase the number of surgeon / family post surgical conversations that occur in a private setting with the attending surgeon.

![Surgical Consultation in Private Rooms](image)

- Displayed Data in Surgical Lounge and presented to OR/PAR Committee
- Posted Data to OR/PAR Committee Website

- **All Services**
- **GU Service**
- **PV Service**
Analysis-Aim 1

- These results include all surgical services in the OR department that have families registered in the Surgical Waiting Room between the hours of 6am - 9 pm Monday through Friday.
  - Variation occurs among service lines
  - Blue line indicates private consultations from all surgical service lines
  - Pink line indicates private consultations specific for Genito-Urinary service
  - Green line indicates private consultations specific for the Peripheral Vascular service
  - There is overall improvement in the number of post surgical conversations occurring in a private consultation room from 51% to 67% between June 2010 and January 2011 (Will update with February and March Data)
  - Sharing Departmental results with specific services has increased the use of private consultation rooms; methods include
    - writing letters to the Chairman of each surgical service
    - posting data results in the physicians’ lounge, and
    - proactively directing surgeons to a private consultation room
Next Steps

- Post surgery, the Operating Room RN will notify the Surgical Waiting Room Staff to place the family in a private room in anticipation of the surgeon’s arrival.
- Recommend and facilitate the use of private consultation rooms when the surgeon arrives in the waiting room without prior notice.
- Continue to work with service line outliers to identify opportunities and methods that will improve performance.
Results

Aim #2: Improve patient and family satisfaction related to communication enhancements in the SWR.

Q1: Did you feel that you received progress updates about your loved one’s surgery?

Q2: Did you feel that the staff respected you and your family member’s privacy while talking about surgery?

Q3: Did you feel the staff in the waiting room was helpful?

Q4: Did having the pager increase your confidence that you would not miss updates and other communications during surgery?
Results

Q5: What could be done to make this a better experience for you and your family?

"I think everything was done really well & felt that everyone truly cared about myself & the patient. Thank you"

"Surgeon sought the family to inform of the pt status in a private manner - Thanks"

"Nothing! Everyone on staff was helpful and kind. Thank you."

"Everything is very carefully planned and very professionally thought out. I really feel good."

"The Consultation room with the doctor is the best too!"
Analysis-Aim 2

Aim #2: Improve patient and family satisfaction related to communication enhancements in the Surgical Waiting Room.

- Pagers were originally introduced on a 2-month pilot project to determine impact on ability to give timely updates to families
- Survey designed and distributed for one month - February 2011
- All 4 questions had positive feedback, showing 97% or higher “Yes” answer
- Question 5 asked for additional comments
- Sharing results with staff identifies opportunities for improvement regarding use of pager
Next Steps

In the spirit of Magis, the Operating Room Nurses, Surgeons and Surgical Waiting Room Representatives have come together to improve patient/family communication and satisfaction.

Customer Satisfaction during the intra-operative process at Loyola is an on-going effort subject to continuous improvement.

- Must be monitored – satisfaction survey conducted 1 month per quarter to collect feedback from families.
- Open-ended question asking what could be done to make this a better experience for customers produces comments that:
  - raise talking / action points for staff
  - allow customers’ voice to be heard
  - identify service failures
  - highlight opportunities for future improvements
- Continue to share results with the O.R. Team members and leadership.
Conclusion

“... Someone filled with the Magis spirit will be a thoughtful co-worker, a respectful leader, a compassionate colleague - concerned and committed in one's daily outreach to patients and families, students and co-workers.”

(source: http://www.luhs.org/internal/depts/magis/index.htm)
The Language of Patient Safety: Spanish Bilingual Medical Student Certification

Team Membership

Katherine O’Rourke, M3
Erin Stratta, M3
Jason Howell, M3
Dr. Gregory Gruener, Senior Associate Dean, Medical Education
Dr. Scott Graziano, Clerkship Director, Assistant Professor, Obstetrics and Gynecology
Donna Quinones, Manager, Clinical Skills
Beth Sonntag, Director, Teaching and Learning Center
Opportunity Statement

Language concordance between patient and health care provider improves health care outcomes. (1, 2)

Patient safety is put in jeopardy when students with limited Spanish proficiency inappropriately decline the assistance of professional interpreters.

Two years after implementing a Peer-Led Medical Spanish Program, Loyola University Chicago Stritch School of Medicine furthered its dedication to assure patient safety through competent language assistance by implementing the Spanish Bilingual Medical Student Certification.

AIM Statement

The Spanish Bilingual Medical Student Certification aims to identify students who can provide bilingual care without an interpreter’s assistance before they begin clinical rotations, thereby increasing patient safety.
The Certification was implemented in 2010. It evaluates students’ Medical Spanish and cultural competency skills through two standardized phone exams designed to validate physicians’ and bilingual staff members’ skills and an objective standardized clinical exam. Students who pass all three component exams will be recognized by ID tags and transcript notations. Certified students will receive priority placement at Spanish-speaking clinical sites.
Results

• 10 students successfully earned the certification and are currently caring for Spanish-speaking patients during their clerkships.
• 100% of the students reported the Certification provided a valuable experience
• 80% reported it accurately measured their skills,
• 90% reported it made it easier for others to recognize their skills
Student Reports of Certification Outcomes

- Provided a valuable experience
- Accurately measured my skills
- Made it easier for others to recognize my skills
The Certification has helped students recognize how to safely use their Spanish skills while caring for patients.

Patients are better able to understand and play an active role in their health care as Certified Students facilitate their communication with the health care team.

We will be able to observe the full benefits of the program once certified students receive ID tags and priority placement at Spanish-speaking sites and the medical center staff and patients are more familiar with the program and the resources certified students offer.
The Spanish Bilingual Medical Student Certification will serve as a model to be adapted to bilingual physicians and medical staff members and to be adopted by other institutions.
Pictures of students and employee standardized patients during the objective standardized clinical exam.
Measuring Functional Progress Throughout LUMC Rehabilitation Services

Mike Tomasek, PT, DPT, PT Resource Clinician
Beth Vander Meulen, OTR/L, Acute Rehab Unit Occupational Therapist
Beth Fries, OTR/L, Acute Care Occupational Therapist
Ewa Jaraczewska, PT, Manager, Rehabilitation Services
Improving Functional Outcomes

- **Self Assessment** Prior lack of comprehensive outcome measures for Therapy Services
- **Standardized Testing** The Barthel Index (BI) monitors functional outcomes at each Inpatient Physical and Occupational Therapy level of care
- **Setting a Benchmark** A BI score of 85 or higher correlates with being primarily independent with self-care and mobility

AIM Statement

• Improving overall patient independence with mobility and self-care
• Meeting the standard BI Score of 85 or greater in 50% of the patients upon Acute Rehab discharge
Solutions Implemented

Dressing, feeding & bathing were identified as areas for improvement during patients’ rehabilitation

- Feeding/swallowing group implemented
- Adaptive equipment more readily available
- More autonomous self-care was emphasized outside therapy sessions
Results

Discharge BI Scores

% BI scores > 85

Quarter 2010

Patient-centered self-care identified areas for improvement.
Loyola Spectrum of Care

Results

Bi score

Inpatient and Acute Rehab

Rehab Admission

Rehab D/C
Results

Dressing Score

Average Score

Month

1 2 3 4 5 6 7 8 9 10 11 12
Analysis

• Goal was achieved in the most recent quarter. Patients are being discharged at a higher level of independence.
• Continuous identification of areas for improvement leads to a forward thinking team.
• Interdisciplinary approach is key to success.
Next Steps

• Will continue to monitor Barthel Index scores to maintain achieved goal and seek further improvement.

• Therapy Services looks to include Day Rehab Services as an extension of current LUMC rehabilitation data for a more comprehensive picture of patient care at Loyola.
Pain Attitudes and Practice

Pain Management Committee:

Mary Morrow, Rose Lach, Joseph Holtman, Jr, Ann Edlbauer, Barb Pudelek, Barry Bennett, Chris Reis, Evdoxia Kyritsis, Jeanne Keanne, Kathleen Moon, Linda Nicol, Margaret Borgert, Mary Foley, Michael Sniderman, Nicole Artz, Pam Clementi, Patricia Scafuri, Paul Sewing, Rana Monsour, Stacy Hubert, Scott Byram, Thomas Rostafinski, Vanessa Jennings, Whitney Henderson and Jeanne Sadlick, Librarian.
Goal Statement

- Improve pain management HCAHPS patient satisfaction top box percentages from 62% to 80% by May 2011.

Pain management is an important aspect of patient care and patient satisfaction. Traditional strategies to improve pain management outcomes and patient satisfaction among hospitalized patients remains inadequate. LUMC’s Pain Committee has been charged with keeping patients comfortable by creating a pain-free clinical environment. One first step was to investigate the current behaviors and attitudes towards pain by LUMC practitioners.
Solutions Implemented

- Pain Order Set-revised 2006
- Department Grand Rounds Presentations-2009
- Pain Management Guidelines-revised 2009
- Pain e-learning Fall 2009
- Pain Resource RN Committee-revived–Spring 2010
- One and ½ day Pain Workshop -May 2010
- Pain Behavior & Attitude Survey-Fall 2010
- Patient Satisfaction data sharing-ongoing
- Addition of Chronic Pain Service-2010
- Low-dose Ketamine Program-January 2011
- 4 hour Pain Reassessment Documentation Project-2011
Results

HCAHPS PAIN TOP BOX Publically Reported Data

- Loyola University Medical Center
- Illinois Hospital Average
- US Hospital Average

Top Box Percentage

Rolling 12 Month Periods

Results

Loyola University Medical Center HCAHPS Composite Pain Management (Unadjusted % Top Box Rates)
All Inpatient Locations - CMS Qualified Data (Jan 2010 - Dec 2010)

AVG: 68.78
Avatar AVG: 68.29

Your AVG: 68.78
Behavior and Attitudes Survey: Demographics: MD/APNs

**Physician/APN Categories**

- Attending: 54.2% (96 responses)
- Fellow: 7.3% (13 responses)
- Resident: 21.4% (38 responses)
- APN: 16.9% (30 responses)
- Medical student - 3rd year: 1.9% (3 responses)
- Medical student - 4th year: 0.6% (1 response)
- Other: 3.1% (5 responses)

**MD/APN Area of Interest**

- Burn: 2% (4 responses)
- Cardiac: 2% (4 responses)
- Emergency room: 3.5% (6 responses)
- Labor & delivery: 5.6% (10 responses)
- Medical: 25.4% (45 responses)
- Neurology: 6.7% (12 responses)
- Oncology: 6.2% (11 responses)
- Operating room/recovery: 2.2% (4 responses)
- Orthopedics: 4.7% (8 responses)
- Pediatrics: 11.2% (20 responses)
- Rehabilitation: 6% (12 responses)
- Surgical: 11.2% (20 responses)
- Trauma: 6% (12 responses)
Behavior and Attitudes Survey: Demographics: RNs

Most relevant category: Nurse

Specialty or area of Interest

Most relevant category: Nursing Student
Behavior Survey: MDs/APNs

I screen for pain in all my patients every visit

Before I order a PRN analgesic for a patient, I assess the intensity of the pain.

I teach patients whom to contact if they have unrelieved pain

When a patient is changed to a different opioid, I do an equianalgesic calculation to determine whether the dose of the new drug is likely to provide the same amount of relief.
Attitude Survey: MDs/APNs

I like to be known as a person who doesn't complain about pain.

Some patients exaggerate their pain as a way of getting attention.

Patients are often embarrassed to tell their nurse that they are hurting.

Patients should experience discomfort prior to receiving the next dose of pain medicine.
Behavior Survey: Nurses

I screen for pain in all my patients every shift or visit.

I re-assess patients' pain within 2 hours of a report of pain of moderate or greater intensity.

I teach patients whom to contact if they have unrelieved pain.

I include non-pharmacologic interventions in my care of patients in pain.
Attitude Survey: Nurses

I like to be known as a person who doesn't complain about pain.

Some patients exaggerate their pain as a way of getting attention.

Patients are often embarrassed to tell their nurse that they are hurting.

Patients should experience discomfort prior to receiving the next dose of pain medicine.
Analysis

- There has been a steady incremental improvement in the HCAHPS Pain Improvement percentages although our mean is not where we would like it to be. It is not apparent if any one single intervention was more effective than others.

- As of January 2011, most of the inpatient units (over 50%) show a positive change from baseline over the past three months for the Avatar Pain Management Factor.

- The response to the Pain Behavior and Attitude Survey was respectable indicating an interest in pain management throughout the institution. The data will serve as a baseline and will be studied by the Pain Management Committee to identify opportunities for education. Noted, in the comment section of the survey, practitioners noted they may have selected never for questions regarding opioids, if they do not normally give opioids in their practice setting.
Pain reassessment and documentation has been seen as a useful tool in improving pain management. Currently there is an initiative to document pain reassessment in the EMR within 4 hours. Final data will be available in the next quarter.

Other solutions targeted for the next year:

- Increase Pain Management Education for resident physicians.
- Create a pain flyer indicating LUMC’s concern for their comfort during their admission.
- Support pain management quality improvement projects at the department, service line, or unit level.
- Support evidenced-based pain management guidelines by disease entities.
- Encourage regular rounding by nurse managers and staff that includes pain assessments.
- Intravenous acetaminophen project.
- Creation of a Pain Medicine Center of Excellence.
- Expand pain psychology services.
6 WEST PATIENT-CENTERED CARE

Aligning our Service with the Patient’s Perspective
6 West Opportunity Statement

We found that good technical care alone will not bring customers back, we had to find a way to enhance the total patient experience in order to retain our customers. We had the opportunity of utilizing the opening of a new unit (September 2010) to re-evaluate our current model of care and fine-tune it to put the patient at the center of our care.
Project Aim Statement

- The 6-West staff will implement patient-centered care concepts to respond to patient/family needs to improve the overall patient satisfaction scores to above 95% on selected Press-Ganey questions.

- Questions selected to follow include:
  1. Staff concern for your privacy
  2. Staff included you in decision making regarding your treatment
  3. Staff attitude toward visitors
Patient-Centered Care

- Quiet times
- Clergy
- Education on procedure, outcome expectations
- Emotional support or spiritual support
- Empower and educate patients
- Ensure physical comfort
- Respect preferences and needs
- Adjusting med schedules to patient
- Writing patient goals on whiteboard
Patient-Centered Care Must Haves

- Bed-side change of shift report
- Hourly rounding on patients to assess the 3Ps (positioning, pain, potty needs)
- Involvement of patient and family in plan of care
- Dress code
- Utilization of Communication Boards
- Quiet Time
- Discharge follow-up phone calls
Patient Centered Care Training

September 8, 2010:
6 West Patient Centered Care Floor Opened

Started Bedside Reporting

Satisfaction Score

UCL = 91.99
Mean = 85.26
LCL = 78.53

Satisfaction Score

6W - Staff Attitude Towards Visitors

UCL = 95.24
Mean = 86.92
LCL = 78.59

Patient Centered Care Training September 8, 2010:
6 West Patient Centered Care Floor Opened

Started Bedside Reporting


50 60 70 80 90 100
6W - Patient Felt Staff Included Them In Decisions Regarding Treatment

- UCL = 89.22
- Mean = 80.74
- LCL = 72.25

- Patient Centered Care Training: September 8, 2010: 6 West Patient Centered Care Floor Opened
- Started Bedside Reporting
Findings and Next Steps

- We have had an upward trend in the selected scores
- Teamwork on the unit has increased
- Continuous follow-up and sustaining activities are critical
- Continuing to add more questions to follow and improve upon is a must
- Continued assessment of impact and adjustments to continue upward growth is essential
Other Potential Benefits

- Increased patient satisfaction scores
- Increased employee satisfaction/retention
- Reduction in falls
- Reduction in call light usage
- Being measured monthly by Press-Ganey survey results
Special Thanks to…

Patient-Centered Team steering Committee
Trish Cassidy
Ken Fishbain
Ellyn Chin
Bev McAdam
Brett Wakefield
Connie Clark
Al Goldberg
Dr Hanlon
Bill Reichert

The entire 6th floor nursing staff including all nurses, Patient care assistants and secretaries
PNEUMONIA

Team Membership:
Chad Whelan, MD
Rose Lach, PhD, RN
Michael Wall, PhD
Susan Laughlin, BSN, RN

Force 6: Quality of Care
Force 7: Quality Improvement
Force 9: Autonomy

Clinical Departments: Emergency Medical Services, General Medicine, Cardiac Services

Hospital Departments: 6 Northeast, 3NESW, 2 NE, Emergency Department, Center for Clinical Effectiveness

Confidential: For Quality Improvement Purposes Only
Room for Improvement

To increase the rates for those quality measures specific to the Pneumonia Core measure:

- Antibiotic timing
- Appropriate Antibiotic Administered
- Adult Smoking Cessation Counseling
- Blood Culture Collection
- Pneumococcal Vaccination: > 65 years of age
- Influenza Vaccination: > 50 years of age
Goals

- Initial antibiotics administered within 6 hours of arrival at hospital
- Appropriate antibiotic administered
- Blood cultures collected prior to initial antibiotic dose
- Pneumococcal Vaccine administered to patients > 65 years old prior to discharge
- Influenza Vaccine administered to patients > 50 years old prior to discharge
- Smoking Cessation Counseling completed prior to discharge
Plan

- System-wide influenza campaign Oct-Feb with posters placed in general population and all in-patient rooms.
- Pneumovax/Influenza in-services to inpatient units.
- Monthly ED “dashboard” reports with timing and outliers provided.
- Provide performance data to Senior Management, Leapfrog Committee, Pneumonia Task Force & all nursing units.
- EPIC pneumonia & influenza vaccine screening on patient database. If screen positive, vaccination orders placed by nurse.
- Medication given as a routine timed medication vs. PRN.
Core Measures
Pneumonia Patients Composite Score

Month

Loyola - Composite Score
UHC - Ninetieth Percentile Composite Score (Better Performers)
UHC - Median Composite Score
UHC - Tenth Percentile Composite Score (Worse Performers)
Next Steps

• Update screening protocol with new exclusion criteria.
• Implement “best practice alerts” in nursing admission navigator and MAR.
• Educate nurses on changes in documentation.
• Continue individual nurse specific reports for vaccine screening and administration daily.
Hospital Acquired Pressure Ulcer Reduction Project

Jodi Blaszczyk RN, BSN, CWOCN, Kathy Thiesse RN, BSN, CWOCN
Skin Care Liaison Committee,
Judy McHugh RN, MSN
Impact of Hospital Acquired Pressure Ulcers

- Annual estimate of treatment costs in US hospitals is $11 Billion with a mean length of stay of 13 days.
- Estimated cost of a stage 3 or 4 pressure ulcer is $9,900.

- Loyola experience
  - 2007 LUMC Hospital Acquired Cases found =78
  - 2009 LUMC Hospital Acquired Cases found =39
  - Cost avoidance ($9,900 x 39) =$386,100

Aim Statement / Goals

• Reduce Hospital Acquired “Pressure Ulcers” (PU) Rate
  – Goal: 0%
• Prevent Hospital Acquired “Heel” Pressure Ulcers
  – Goal: 0%
• Increase daily Braden Scale Compliance
  – Goal: 100%
• Documentation of skin assessment on admission
  – Goal: 100%

PLAN

• LUMC participates in quarterly National Database of Nursing Quality Indicators (NDNQI) Studies
  – Point prevalence performed consists of a one day study in which head to toe skin assessments for pressure ulcers, documentation, Braden Scale, & chart audits.
• Braden Scale Daily* Compliance is monitored monthly
  *as a proxy Braden Scale daily compliance consists of random audit done 2 times a month.
Solutions Implemented to Reduce PU

Staff Education:
- Developed 2009 Resources Available Manual & Skin Care Liaisons provided individual unit education – MF 8,11.
- Initiated additional Night Shift Skin Care Liaison Committee meet 4th Friday of month MF 6, 9.
- Began monthly education for new employee RN/PCT orientation on skin & ostomy care MF 1, 8, 11, 14.

Policy & Practice:
- Implemented evidenced based Decision Tree for heel pressure relief – MF 6, 7, 8.

Compliance Monitoring:
- Continue stage I inter-rater reliability of skin surveyor - Magnet Force (MF) 7.
- Created weekly Inpatient Pressure Ulcer report for managers on portal MF 3, 7.

Documentation Improvements:
- Relocated Braden Scale documentation in EPIC to improve compliance – MF 7, 9.
- Added ED documentation on admission POA in ED Admission Navigator – MF 12.

Confidential for Quality Improvement Purposes Only
Implementation of Braden Scale Order Set & Decision Tree: Heel Pressure Ulcers

According to the U.S. National Pressure Ulcer Advisory Panel, the heel was the second most common site of pressure ulcers. NPUAP (2001)

Improved Documentation of Pressure Ulcer Prior to Admission (POA)

Confidential for Quality Improvement Purposes Only

Confidential for Quality Improvement Purposes Only
Confidential for Quality
Improvement Purposes Only

HOSPITAL WIDE BRADEN SCALE COMPLIANCE

<table>
<thead>
<tr>
<th>NUMBER</th>
<th>DATE</th>
<th>ASSESS</th>
<th>CENSUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>44</td>
<td>DEC 08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>JAN 09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>FEB 09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>MAR 09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>APR 09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>MAY 09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>JUN 09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>Jul 09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>52</td>
<td>Sep 09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>53</td>
<td>Oct 09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>54</td>
<td>Nov 09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>55</td>
<td>Dec 09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>504</td>
<td></td>
<td>504</td>
<td>504</td>
</tr>
<tr>
<td>569</td>
<td></td>
<td>569</td>
<td>569</td>
</tr>
<tr>
<td>557</td>
<td></td>
<td>557</td>
<td>557</td>
</tr>
<tr>
<td>568</td>
<td></td>
<td>568</td>
<td>568</td>
</tr>
<tr>
<td>589</td>
<td></td>
<td>589</td>
<td>589</td>
</tr>
<tr>
<td>285</td>
<td></td>
<td>285</td>
<td>285</td>
</tr>
<tr>
<td>571</td>
<td></td>
<td>571</td>
<td>571</td>
</tr>
<tr>
<td>492</td>
<td></td>
<td>492</td>
<td>492</td>
</tr>
<tr>
<td>266</td>
<td></td>
<td>266</td>
<td>266</td>
</tr>
<tr>
<td>580</td>
<td></td>
<td>580</td>
<td>580</td>
</tr>
<tr>
<td>517</td>
<td></td>
<td>517</td>
<td>517</td>
</tr>
<tr>
<td>269</td>
<td></td>
<td>269</td>
<td>269</td>
</tr>
<tr>
<td>511</td>
<td></td>
<td>511</td>
<td>511</td>
</tr>
<tr>
<td>580</td>
<td></td>
<td>580</td>
<td>580</td>
</tr>
<tr>
<td>571</td>
<td></td>
<td>571</td>
<td>571</td>
</tr>
<tr>
<td>568</td>
<td></td>
<td>568</td>
<td>568</td>
</tr>
<tr>
<td>595</td>
<td></td>
<td>595</td>
<td>595</td>
</tr>
<tr>
<td>297</td>
<td></td>
<td>297</td>
<td>297</td>
</tr>
<tr>
<td>576</td>
<td></td>
<td>576</td>
<td>576</td>
</tr>
<tr>
<td>521</td>
<td></td>
<td>521</td>
<td>521</td>
</tr>
<tr>
<td>270</td>
<td></td>
<td>270</td>
<td>270</td>
</tr>
<tr>
<td>583</td>
<td></td>
<td>583</td>
<td>583</td>
</tr>
<tr>
<td>518</td>
<td></td>
<td>518</td>
<td>518</td>
</tr>
<tr>
<td>270</td>
<td></td>
<td>270</td>
<td>270</td>
</tr>
<tr>
<td>98</td>
<td></td>
<td>98</td>
<td>98</td>
</tr>
<tr>
<td>100</td>
<td></td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>99</td>
<td></td>
<td>99</td>
<td>99</td>
</tr>
<tr>
<td>96</td>
<td></td>
<td>96</td>
<td>96</td>
</tr>
<tr>
<td>99</td>
<td></td>
<td>99</td>
<td>99</td>
</tr>
<tr>
<td>100</td>
<td></td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>100</td>
<td></td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>100</td>
<td></td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Temporary: UCL=101.74, Mean=99.08, LCL=96.42 (mR=2)

Goal = 100%
Combined Analysis of Data

- Nosocomial PU rate has decreased with implementation of Inter-Rater Reliability on Stage 1 ulcers.
- New ED RN Documentation is assisting in capturing Pressure Ulcers Present on Admission (POA).
- Implementation of Decision Tree for heel pressure relief and low, mod, high risk Braden order sets has reduced nosocomial heel ulcers. Met Zero Heel Pressure ulcers past 2 quarters.
- Met Braden Scale 100% compliance
  - Identifying who is at risk allows for earlier implementation of a pressure ulcer action plan.
## Next Steps

### Staff Education:
- Night shift Skin Care Liaisons to complete NDNQI PU training modules with 1.5 CEUs – MF 6, 7, 8.
- Educate managers/skin care liaisons on Interpreting/utilizing weekly inpatient PU report & NDNQI reports on report channel to target individual units areas of improvements – MF 3, 7, 11.

### Compliance Monitoring:
- Maintain stage 1 inter-rater reliability of skin surveyor – MF 7.
- Evaluate, with clarity report, ED documentation on admission POA – MF 12.
- Utilize weekly Inpatient hospital acquired PU report to identify and target nursing units with high rates – MF 7.

### Policy & Practice:
- Evaluate Wound Care Product line with Med/Surg Value Analysis Team (VAT) – MF 7.
- Adding hyper links to references available to EPIC Braden Scale Order Sets

### Documentation Improvements:
- Formulate plan for house wide education on wound documentation – MF 7.
- Submit improvements in EPIC for documentation on wounds – MF 7.
Meet the Skin Care Liaison Team

Day

Jodi Blaszczyk  ET, Chair
Kathy Thiesse  ET
Gail Klotz  7SW
Debbie Terrell  2NE
Susie Irving  7BICU
Paula Ferrel  6E
Soo Howell  2ICU
Isabel Orono  6E
Melody Cibock  6WBMT
Charlene Wiegland  5Rehab
Mark Beluga  5Rehab
Sandy Carmargo  HTU
Barbara Brower  2ICU
Barbara Rumik  MICU
Mary Oczko  MICU
Jennifer Data  2W

Karen Thomas  5T
Debra Callender ER
Maria Poblete GI
Michelle Regasa  3NSEW
Divine Tongol GI
Theresa Pavone  3NSEW
Marybeth Jabeguero GI
Judy King  4ICU
Maria Nardulli  5T
Megan Pugh  PEDS
Melinda Adams  PEDS
Ginger Lewis  Urology
Theresa Schwenkel  2NE
Eva Grabala  2W
Eli Ayala  HTU

Night

Kathy Thiesse, ET Chair
Jane Williams MICU Co-Chair
Sally Ciukaj ED
Jessica Ray  2W
Jessica Amundsen  2W
Johnson Vachachira HTU
Tracy Frazzini HTU
Jamise Gant  3NEWS
Jason Morandi  4ICU
Eileen Dulce  4ICU
Lindsay Buckman  4T
Kimberly Simons  4T
Anitha Saravanan  5T
Bobbie Halikowska  5T
Deborah Zatecka  6W
Paula Farrell  6E
Sandra Dominguez BICU

Bobbie Halikowska  5T
Lori Black MICU
Deborah Zatecka  6W
Paula Farrell  6E
Brianna Piet  6E
Background

- TJC updated position statement on flash sterilization (FS) in 2009
  - Focus on cleaning, decontamination, sterilization & storage
- When performed safely, FS is considered safe & effective
- Its use has raised safety concerns because of its pressure to clean, decontaminate & sterilize instruments quickly
Opportunity Statement

- GMH had no baseline data on FS
- Initial objectives
  - Establish the frequency of FS
    - # of FS instruments/total # of sterilized instruments in Sterile Processing Dept (SPD)
    - Identify flash sterilized instruments
  - Identify reasons for FS
- Look for solutions for improvement
Aim Statement

- Establish the baseline FS rate
- Reduce the identified rate by 50% by July, 2010
Key Improvements

- New FS log created in Dec, 2009
  - Able to establish a baseline data
  - Able to identify most frequently FS instruments

- Instruments acquired to create additional trays
  - Cataract tray sets from 5 to 8
  - Total hip and knee joint trays from 3 to 4
  - Drill for total joints from 3 to 5
Key Improvements

- SPD purchased a new low heat sterilizer - Sterrad NX
  - Reduced instrument turnaround time from 120 min to 80 min
- Process changes
  - Ortho and open heart drill batteries sterilized in SPD
  - Loaner trays delivered at least one day before procedure to be sterilized in SPD
Purchased a table top Sterrad NX Sterilizer.

OR obtained more surgical trays, specifically 3 cataract and additional ortho joint trays as well as 3 camera head and light cables.

New process for ortho and open heart drill batteries.
Analysis

- 1st & 2nd quarter FS rate: 5.8%
- 3rd & 4th quarter FS rate: 2.8%
- Achieved the goal of 50% reduction
- Continue to show downward trend
Next Steps

- Continue to manage instruments used by multiple specialties
- Monitor surgery schedule and arrange surgical procedures to allow time for processing in SPD
- Continue to improve communication between SPD and OR to increase efficiency
Reducing Hospital Admissions for Home Care Patients With Congestive Heart Failure

Loyola Center for Home Care and Hospice

Dorothy Beglin, RN, BSN  
Suzanne Miceli, RN  
Christy Papp, RN, BSN  
Ruth Powell, RN, BSN  
Jacalyn H. Kareb, RN, MS, CHPH, Nurse Manager
Opportunity Statement

Evaluate whether standardized care will decrease the likelihood of home care patients with a primary diagnosis of congestive heart failure (CHF) being admitted to the hospital

Patients with congestive heart failure have a high rate of repeat hospital admissions. Hospitals are working to reduce the number of admissions for this patient population. Home health care is one post-acute strategy hospitals may use to achieve this goal.

Hospital admissions for patients receiving home health services is one measure of quality publicly reported by the Centers for Medicare and Medicaid Services (CMS). In December 2009, Loyola Home Care observed 34.6% of their patients were admitted to the hospital at some time during their home care experience. The most frequent reason for hospital admission at that time was congestive heart failure (9.2% of all hospital admissions from home care).
AIM Statement

Reduce the total percent of home care patients with any diagnosis who are admitted to the hospital to less than 20% by January 2011.

Of all home care patients who are admitted to the hospital, reduce the percent admitted for CHF to 5% by January 2011.
Plan: Implement Best Practices

- Agency enrollment in the Home Health Quality Improvement National Campaign (January 2010)
- Establish priority for implementing best practices to reduce admissions for heart failure (May 2010)
- Heart Failure Best Practice team formed to determine evidence base for heart failure care (June 2010)
- Pilot project for best practices for home care management of patients with heart failure implemented (August 2010)
Pilot Patient Selection

- **Included:**
  - All patients newly referred to home care between August 2010 and November 2010 with a primary diagnosis of CHF (N = 8)

- **Excluded:**
  - Existing patients with a primary diagnosis of CHF
  - Existing patients who had CHF as a co-morbidity (i.e., not their primary reason for referral to home care)
Heart Failure Best Practices for Home Care Patients

- Home care nurse visit on day after hospital discharge for all patients with primary diagnosis of congestive heart failure
- More frequent visits at the beginning of the home care episode ("Front Loading")
- Telephone assessment between nurse visits
- Standard patient instructions
- Involve patient, family in disease management
  - Heart failure self management goals
  - CHF Zones for Management
  - CHF Self Care Record
Reducing Total Percent of Home Care Patients Admitted to the Hospital
Decrease Percent of Hospital Admissions for Home Care Patients Due to CHF

Overall percent of hospital admissions due to CHF:
December 2009 = 9.2%  
November 2010 = 5%
REDUCING HOSPITAL ADMISSIONS FOR HOME CARE PATIENTS WITH CONGESTIVE HEART FAILURE

PILOT PROJECT OUTCOMES

NO HOSPITAL ADMISSIONS FOR CONGESTIVE HEART FAILURE!

Home Care best practices for patients with congestive failure implemented on all visits for all patients in the pilot.

N = 8 home care patients with primary diagnosis of congestive heart failure
Pilot implementation – August 2010 through November 2010

<table>
<thead>
<tr>
<th>Metric</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Received standard education materials</td>
<td>8</td>
<td>100</td>
</tr>
<tr>
<td>Record of daily weights in patient home</td>
<td>8</td>
<td>100</td>
</tr>
<tr>
<td>Documentation of patient weight with each home care nurse visit</td>
<td>8</td>
<td>100</td>
</tr>
<tr>
<td>Telephone assessment between scheduled home care nurse visits</td>
<td>8</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hospital Admissions by Reason</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exacerbation of congestive heart failure</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Reason other than heart failure</td>
<td>2</td>
<td>20</td>
</tr>
</tbody>
</table>

(Source of data: Home care patient record)
Pilot Project Outcomes: Findings

- No hospital admissions due to congestive heart failure for 100% of home care patients in the pilot project when best practices were implemented.
- Total percent of home care patients admitted to the hospital for any diagnosis is decreasing.
- Overall percent of total hospital admissions of home care patients for CHF decreased to 5% in November 2010 from 9.2% in December 2009.
- Positive patient & family feedback on teaching and self care tools.
Pilot Project Outcomes: Opportunities for Improvement

- Revise self care record to include > 7 days
- Establish concrete guidelines for use of phone calls as an adjunct to home visits for final best practice protocol
- Explore collaboration with Heart Failure Clinic for long term patient management
- Invite other home care disciplines to join the team facilitating a more interdisciplinary approach to care of home care patients with congestive heart failure
Next Steps

- Implement best practices for all patients admitted to home care with primary diagnosis of congestive heart failure (Feb 2011)
- Conduct record audit of home care records to assess implementation of best practices (April 2011)
- Establish ongoing support for patients with referral to the Heart Failure Clinic upon discharge from home care
- Explore implementation of additional care:
  - Agency provided pill boxes for medication management
- Involve other home care disciplines in ongoing development of best practices
  - Dietitian
  - Occupational therapist
- Staff education to further improve best practices
  - Assessing early signs of impending heart failure
Road to Recovery Program

Acute Rehabilitation Unit
Team Membership

- Dr. Steve Gnatz-Rehab Medical Director
- Paul Gorski MPH-Administrative Director
- Elmer Dulce RN, BSN, MBA-Nurse Manager
- Kathleen Xenakis RN, BSN-PPS Coordinator
- Mary Vondriska RN, BSN-Staff RN
- Michael Tomasek DPT-Physical Therapist
- Barbara Sirovatka RN, MS-Case Manager
- Moira Aronson-Brown MS, CCC-Speech Therapist
- Nursing Staff
- Therapy Staff
Opportunity Statement

Each year Loyola Rehab Unit treats 30 to 35 severely disabled stroke patients. These patients are categorized into two Case Mix Groups (CMGs):

**CMG 0109:** maximum assistance from staff for ADLs* and mobility activities*

**CMG 0110:** total dependence on staff for ADLs* and mobility activities*.

Data* shows stroke patients in CMG 0109 and 0110 will require at least minimum assistance with ADLs and ambulation upon discharge.

Primary focus of the Road to Recovery program was early identification, education, and training of the primary caregiver/s.

*Activities of Daily Living: Feeding, Grooming, Bathing, Dressing, Toileting
*Mobility Activities: Chair and bed transfers, w/c propulsion, ambulation
*Data from Erehabdata reflects results from CY 2008 and 2009
Loyola below National and Regional norms for CMG 0109 (18%) and CMG 0110 (14%)
Aim Statement:

Stroke patients in Case Mix Groups 0109 and 0110 will be enrolled in the Road to Recovery Program and will show an increased percentage of discharged to home as compared to the national and regional averages. Higher percentages will be evident after one year of implementation of the program.
Solutions Implemented

- An interdisciplinary committee was formed in October 2009 to develop a program specific to stroke patients who were in CMG 0109 and 0110.

- Communication Tools developed for Program:
  - Road to Recovery Brochure
  - Discharge Map
  - Caregiver Checklist
  - Road to Recovery/Independence Day Signage

- All staff inserviced on Road to Recovery Program

- Performed a rapid cycle test of change on 1 patient in early January 2010 to test components of the program.

- Road to Recovery Program was implemented on January 9, 2010
Loyola surpasses National and Regional Rate in one year!
35% Increase of patients discharged to home: CMI 0109.
37% Increase of patients discharged to home: CMI 0110.
Analysis

• Loyola Rehab Unit’s Road to Recovery Program has improved the rate of home discharge for CMG 0109 and 0110.

• A Post-Independence Day survey (see graph) shows the experience was useful for the caregiver.

• Compliance to the Road to Recovery Discharge Map was occasionally hindered by the inability to identify the caregiver within first week of admission.

• Outliers to the program did occur such as caregivers who could not/refused to attend the Independence Day.
Family Members Are Prepared!

Acute Rehab Unit
Road to Recovery
Post-Independence Day Survey
n=14

<table>
<thead>
<tr>
<th>Questions</th>
<th>Response (1-4 scale)</th>
</tr>
</thead>
<tbody>
<tr>
<td>This experience was useful in preparing me for the care of my loved one at home.</td>
<td>3.9</td>
</tr>
<tr>
<td>I felt I was well prepared going into the &quot;Independence Day&quot; trial.</td>
<td>3.6</td>
</tr>
<tr>
<td>I now feel confident that I can safely perform all the care for my loved one.</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Confidential for Quality Improvement Purposes Only
Next Steps

- Review outliers and develop alternative training tools for caregivers.
- Perform follow up calls 1 month after discharge to see how patient/caregiver is doing.
- Use Road to Recovery concepts on other patient populations.
Making Surgery Safer: Surgical Care Improvement Project

Team Members:
Dr. W. Jellish, Dr. R. Milner, Dr. P. O’Keefe, Dr. J. Parada, Dr. E. Mueller, M. Fitzgerald, M. Kawka, J. Keane, J. Keeler, D. Marra, A. Quinn, D. Serwa, S. Swanson, A. Tomich, L. Vis, M. Wall

Confidential: For Quality Improvement Purposes Only
The Surgical Care Improvement Project (SCIP) is a national quality partnership of organizations interested in improving surgical care by significantly reducing surgical complications, specifically surgical site infection, venous thrombo-embolism, and acute myocardial infarction.

Loyola’s performance for these measures is publicly reported at:

- JOINT COMMISSION: www.qualitycheck.org
- IDPH: www.healthcarereportcard.illinois.gov
- CMS: www.hospitalcompare.hhs.gov
Project Goal:
To Achieve Top Decile Performance Nationally

SSI Measures:
- Antibiotic within 60 minutes of surgical incision
- Appropriate antibiotic selection
- Discontinuation of antibiotics within 24 hours after surgery
- Post-operative Glucose control – CV surgery
- Appropriate hair removal
- Postoperative temperature control for all cases greater than 60 minutes
- Removal of urinary catheter by the end of post-op Day 2

VTE Measures:
- VTE prophylaxis ordered
- VTE prophylaxis received

AMI Measures:
- Perioperative beta-blocker administration
## Solutions Implemented in 2010

**Analysis of Outliers & Education**
- Created subgroup for monthly analysis
- Physician specific reports
- Unit-specific SCIP Fact Sheets for Nurses

**Antibiotic Selection**
- Updated guidelines & posted to the Anesthesia Carts

**CV Glucose Control**
- Added additional blood sugar checks/treatment to standing orders

**Beta-Blocker Documentation**
- Modified RN documentation on the Pre-op checklist
- Added medication prompt to the CV pre-op order set
- Created portal report to monitor RN compliance “real time”

**Foley Discontinuation**
- Collaborated with CA-UTI Task Force to support the RN De-Cath protocol

Confidential: For Quality Improvement Purposes Only
**Core Measures**

**Surgical Care Improvement Project Composite Performance**

**Definition:** Surgical patients receiving 100% of indicated antibiotic prophylaxis, glucose control, hair removal, temperature control, beta-blocker continuation, and venous thromboembolism therapy / Patients undergoing CABG, cardiac surgery, hip / knee arthroplasty, colon surgery, hysterectomy, or vascular surgery.

**Data source:** LUMC medical records abstracted by RNs.

**Analysis:** Results show that eighty-four percent of selected surgical patients are receiving all indicated care to prevent surgical infections.
Surgical patients receiving prophylactic antibiotics consistent with current guidelines

**Definition:** Surgical patients receiving prophylactic antibiotics consistent with current guidelines / Patients undergoing CABG, cardiac surgery, hip / knee arthroplasty, colon surgery, hysterectomy, or vascular surgery.

**Data source:** LUMC medical records abstracted by RNs.

**Analysis:** Ninety-seven percent of LUMC patients receive prophylactic antibiotics consistent with current guidelines
Definition: Percent of cardiac surgery patients with controlled 6AM post-operative glucose. Control is defined as serum glucose reading of 200mg/dL or less on both post-operative day 1 and day 2. Results show cardiac surgery patients with the presence of post-operative day 1 and day 2 glucose measurements, readings closest to 6AM were selected for inclusion.

Data Source: LUMC medical records abstracted by RNs.

Analysis: 6AM postoperative glucose control on both postoperative days 1 and 2 dropped in June 2010. Outlier cases are shared with clinicians. The CV ICU clinical team is working to ensure all patients have glucose control following surgery. Daily reports will be available to the clinical team shortlv.
Continuing Beta-Blockers Perioperatively to Prevent Myocardial Infarction

**Definition:** Number of surgery cases receiving beta-blocker (medication to slow heart rate) during the peri-operative period. Patient undergoing major surgery who received beta-blocker therapy prior to admission. This treatment is designed to reduce the risk of myocardial infarction (heart attack) following surgery.

**Data source:** LUMC medical records abstracted by RNs.

**Analysis:** LUMC performance recently increased significantly in 2010. Daily reports are now available and education has been provided regarding complete documentation of medications taken before admission.
**Definition:** Number of surgery cases where the urinary catheter is removed by the end of post-operative day 2 out of all eligible patients. Patients are excluded from this measure automatically if they are in the ICU with diuretics, or if the procedure was urological, gynecological or perineal.

**Data source:** LUMC medical records abstracted by RNs.

**Analysis:** Performance is above 90%. These results have been shared with the catheter associated UTI committee, Anesthesia, and other key clinicians who are working to ensure all patients have catheters removed as soon as indicated.
Next Steps

- Outlier review and analysis
- Focused studies of OFI ’S
- Identify improvement opportunities
- Implement Staff, Physician, and Patient Education on SSI reduction
SMART

• Sustainable
• Multidisciplinary
• Actions
• Reduce
• Threats of Hypertension

Anita Varkey MD; Donna Mitchell, APN; Michael Grant, MA
Antia Calistro, RN, MSN; and Loyola Outpatient Center General Medicine Staff
Opportunity Statement

• Clinical practice recommendations for non-pregnant adult patients with diabetes includes a target blood pressure of less than 130/80*
• It is estimated that 67% of adults patients with diabetes have hypertension.
• Blood pressure control reduces the rise of cardiovascular disease by 33% to 50% and the risk of microvascular complications by approximately 33%**
• In general, the risk for ANY complication is reduced by 12% for every 10 mmHg reduction of systolic blood pressure, down to 130mmHg.**
• The purpose of this project was to improve the blood pressure of hypertensive diabetic patients, in the General Medicine Clinic at Loyola Outpatient Center.

*Diabetes Care, Volume 32, Supplement 1, January 2009
AIM Statement

• The aim of this project was to increase the number of Type 2 Diabetic patients with controlled hypertension (<130/80mmHg) utilizing an Advanced Practice Nurse (APN) – led regimen of medication titration, patient education, and patient home blood pressure monitoring.

• The measurement goal for this project was to successfully control the BP (<130/80mmHg) of 50% of project participants.

• Secondary aim was to increase patient’s knowledge about diabetes and hypertension as measured by pre- and post-program testing.
Project

• Patients were identified by General Medicine Clinic physicians at the Loyola Outpatient Center.

• The APN reviewed the charts of interested patients to determine eligibility (exclusion criteria).

• Patients were enrolled on a rolling basis from 03/01/10 to 09/01/10.

• An appointment was scheduled for an initial visit with the APN.
VISIT 1
• Administered pre-test to asses knowledge regarding diabetes and hypertension
• Measured weight, blood pressure
• Reviewed current medication list and recorded total number of current medications
• General education and lifestyle counseling regarding diet, exercise, and smoking cessation
• Issued home blood pressure monitor with instructions for proper use.
• Medication adjustment using dosing algorithm
• Set goals with patient regarding medication adherence and home monitoring.
• Scheduled follow-up appointment in 2-4 weeks.
**PROJECT**

**VISIT 2 and thereafter**
- Measured weight and blood pressure
- Reviewed medication list and recorded total number of current medications
- Adjusted medications as indicated, using dosing algorithm
- Reviewed home blood pressure log
- Reviewed goals and reinforced diet and exercise
- **Scheduled follow up visit in 2-4 weeks.**

**FINAL VISIT**
- Determined by achievement of target blood pressure.
- Reviewed medication list and recorded final number of medications
- Blood pressure and weight were recorded
- **Administered post-test of basic knowledge regarding diabetes and hypertension**
Results

- 13 patients were enrolled in the program
- 10 completed the program
- 7 patients had a final blood pressure of <130/80 (target)
- All participants lowered their blood pressure
- All participants increased their knowledge regarding their chronic medical conditions
- All patients learned how to take and record their blood pressure at home
- Final patient was seen on 11/01/10
Post-Intervention Blood Pressure Levels

ADA and AHA goal systolic BP of 130 mmHg

Blood Pressure in mmHg

Individual Participants

1 2 3 4 5 6 7 8 9 10 11 12 13

Systolic
Diastolic

ADA and AHA goal diastolic BP of
Pre/Post-Intervention Education Assessment Scores

- Post-Intervention mean score of 13/16
- Pre-Intervention mean score of 11/16

*Mean Pre/Post scores were calculated from the 10 participants who had both sets of data.*
Analysis

- 69% of participants achieved target blood pressures of <130/80mmHg. In the same time frame, the reported percent of diabetics with blood pressures <130/80 for the Loyola Outpatient Center was 40% and for the entire Loyola University Health System was 41%*
- Mean starting blood pressure was 158/84
- Mean ending blood pressure was 126/74
- Mean systolic drop of 32 points
- Patient chronic disease knowledge testing improved by 13%
- Average number of visits per patient: 3

* Ambulatory Care Diabetes Report October 2010. Data Source: Clarity Database. This information is to be used for quality improvement purposes only.
Next Steps

• The results of this project demonstrated that diabetic patients with elevated blood pressures benefited from increasing counseling and coaching with an APN. They were able to monitor their blood pressures at home and take a more active role in their health care.

• Going forward, many physicians in the General Medicine clinic will continue referring patients to the APN for intensified counseling and education along with medical titration.
Trauma Text Paging Project

Evelyn Clark-Kula, RN, MSN, CEN, TNS
Janice Gillespie, RN, BA, TNS
Carol Schleffendorf, MS, RN, CNE
Gina Hardy, RN, BSN
Maggie Howell, RN
Kristi Dombrow, RN, BSN, CEN, TNS
& Michelle Ruther, RN, TNS
With Assistance From: Greg Klitz (IT)
Project Aim Statement

• The purpose of the Trauma Text Paging Project was to improve the quality and accuracy of the information entered into the text paging system for each trauma activation.
Measurement Goal & Target

• The goal of the project was to ensure that all data entered into the text paging system is accurate on 100% of all Loyola trauma activations within 90 days of the project implementation.

• The project was initiated on May 1\textsuperscript{st}, 2010 and is currently ongoing as our goal has not yet been reached.
Solutions Implemented

- Updates made to internal “Triage Indicators for Trauma Alert”
- Text paging system was updated to reflect Triage Indicator form changes
- Education provided to ED staff at intervals via
  - Flyers
  - Staff meetings
  - Real time education when able
- Quarterly meetings held between ED Leadership and Trauma to review data and determine action plan
Triage Indicators for Trauma Alert

"Trauma Level 1- Intubated 44y/o GCS <=8-Ped vs Auto, intubated, multiple injuries ETA 5 mins"
Results

• Initial data revealed 79% accuracy
• Accuracy has fluctuated from month to month between 79% and 96%
Percent Compliant

Individuals
Temporary: UCL=101.08, Mean=87.78, LCL=74.48 (mR=2)

5/2010 (N=110)
6/2010 (N=92)
7/2010 (N=93)
8/2010 (N=106)
9/2010 (N=94)
10/2010 (N=104)
11/2010 (N=74)
12/2010 (N=78)
1/2011 (N=67)
Analysis

- The quality and accuracy of the information contained within each text page has improved since the beginning of our project.
- Although we have had some improvement it has not been sustained.
- The project remains ongoing as we have not yet reached 100% accuracy.
Next Steps

• Continue to meet quarterly until goal of 100% accuracy sustained for a period of 90 days

• Computer to be installed into ED Radio Room for immediate activation of alerts by ECRN
  - ED staff to be required to enter initials into text paging system for accountability
Questions?

- eclark1@lumc.edu
- 708-327-2662