Using Evidence to Improve Outcomes for the Surgical Patient: Post-Operative Interventions

January 16, 2014

A partnership of the Healthcare Association of New York State and the Greater New York Hospital Association
# Agenda

<table>
<thead>
<tr>
<th><strong>TOPIC</strong></th>
<th><strong>SPEAKERS</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Welcome and Introductions</td>
<td>Wing Lee, Project Manager, NYSPFP</td>
<td></td>
</tr>
<tr>
<td>II. Preventing Surgical Site Infections in the Postoperative Setting</td>
<td>Amanda Rhee, MD., The Mount Sinai Medical Center</td>
<td>Suzanne Martz, RN, MA, CCRN, NE-BC, The Mount Sinai Medical Center</td>
</tr>
<tr>
<td>III. Hospital Panel Discussion</td>
<td>David Feldman, MD, MBA, CPE, FACS, Hospitals Insurance Company</td>
<td>Michael Timoney, MD, FACS, Lutheran Medical Center</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pamela Lupfer, RN, MSN, Hudson Valley Hospital Center</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Denise Martosz RRT, BS, Catholic Health System</td>
</tr>
<tr>
<td>IV. Hospital Question and Answer</td>
<td>Facilitated by Maria Sacco, Project Manager, NYSPFP</td>
<td></td>
</tr>
</tbody>
</table>
Summary of NYSPFP SSI Activities – webinar summary

- **Pre-Operative Intervention**
  - Pre-Admission Assessment
    - Medication Reconciliation
    - MRSA/MSSA Screening for Orthopedic Patients
  - Pre-operative bathing
  - Diabetes medication assessment
  - Standardization of pre-operative antibiotics
  - Active warming in pre-operative holding areas to reduce inadvertent hypothermia
  - Patient education
Summary of NYSPFP SSI Activities – webinar summary

- Intra-operative
  - Communication protocols e.g. TeamSTEPPS
  - Glucose monitoring
  - Maintain adequate oxygen tension
  - Normothermia
  - Weight based antibiotic dosing and re-dosing
Reference Materials Available on NYSPFP Website

- Enhancing Operating Room Safety and Prevent Surgical Site Infection Video series by Dr. Patchen Dellinger:
  - Teamwork, Communication, Briefing, Checklists and OR safety
  - Colon Surgery: Bowel Prep, Oral Antibiotics and the best intravenous antibiotic
  - Preventing surgical site infections: Glucose Control
  - Oxygen: What does it have to do with Surgical Site Infections?
  - Skin Preparation and Technical factors that may influence infection risk in surgery
  - Decolonization and prophylaxis for S. Aureus infection prevention in surgical patients
Reference Materials Available on NYSPFP Website

Enhancing Operating Room Safety and Prevent Surgical Site Infection: E. Patchen Dellinger, M.D.

The following series of 30 minute videos review the evidence behind a variety of best practices to prevent surgical site infections and enhance operating room safety:

- Teamwork, Communication, Briefing, Checklists, and O.R. Safety (28 minutes)
  - Recording
  - Presentation
  - Transcript

- Colon Surgery: Bowel Prep, Oral Antibiotics and the Best Intravenous Antibiotic (28 minutes)
  - Recording
  - Presentation
  - Transcript
# Upcoming Programming

<table>
<thead>
<tr>
<th>Date and Time *</th>
<th>Programming/Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Thursday, March 20, 2014</strong>&lt;br&gt;7:00 AM – 8:00 AM</td>
<td>Interventions to enhance OR safety across the OR continuum (Webconference)</td>
</tr>
<tr>
<td><strong>April 2014</strong>&lt;br&gt;In-Person Meeting</td>
<td>Reducing Colon SSI Using the Colon Bundle (In-Person Regional Meetings)</td>
</tr>
<tr>
<td><strong>Thursday, July 17, 2014</strong>&lt;br&gt;7:00 AM – 8:00 AM</td>
<td>TBA</td>
</tr>
<tr>
<td><strong>Thursday, September 18, 2014</strong>&lt;br&gt;7:00 AM – 8:00 AM</td>
<td>TBA</td>
</tr>
</tbody>
</table>
Overall SSI Rate

SSI Standardized Infection Ratio

- SSI Standardized Infection Ratio

2.54% increase
Colon Surgery SSI Rate

COLO SSI Standardized Infection Ratio

25.66% increase
SSI-Colon Surgery Standardized Infection Ratio (SIR) (NHSN), PfP-Aligned Hospitals (n = 2,614)

Source: NHSN (n = 2,614 to 2,673 HEN-aligned hospitals, depending on the quarter).
Source: NHSN (Q1 2012-Q2 2013).
Notes: Progress is seen as movement toward the bottom right corner of the figure, indicating both reduction in harm and low current event rate. Eight HENs showed improvement below -30 percent and are not shown on the graph: DFW, Dignity, EHEN, Intermountain, LifePoint, NJ, VHA, and WA. Current rates are above benchmark. Three HENs are not shown because reporting was under 60 percent: Iowa, Minnesota, and Ohio Children's.
CABG SSI Rate

CABG SSI Standardized Infection Ratio

45.84% decrease
Hip Replacement SSI Rate

HPRO SSI Standardized Infection Ratio

28.31% decrease
Hysterectomy SSI Rate

HYST SSI Standardized Infection Ratio

1.99% decrease

NYS PARTNERSHIP FOR PATIENTS
Preventing Surgical Site Infection
Infections in the Postoperative Setting

Amanda J. Rhee, MD
Assistant Professor
Department of Anesthesiology

January 16th, 2014
NYSPFP SSI/OR Safety Webinar
7-8 am
No Disclosures

The Following Report is the Result of the Efforts of The Mount Sinai Medical Center Team
Surgical Site Infection

• Approximately 1 in 20 Americans admitted to a hospital contracts an infection

• According to the CDC, the direct cost of treating hospital-acquired infections ranges from 28 to 45 billion dollars (2007) yearly.

• New York State tracking of hospital-acquired Surgical site infection
  – Colon Surgery
  – Hip replacement or revision surgery
  – Coronary artery bypass graft surgery
  – Hysterectomy (since 2012)

Coronary Artery Bypass Graft Surgical Site Infection (CABG SSI) Reduction Initiative

**Aim:** Mount Sinai aims to continue its world-class cardiothoracic service with elimination of preventable SSIs.

**Executive Sponsors:** W Keathley, D Reich, I Nash, E Dupree

**Clinical Leaders:** J Kalman, P Stelzer, F Wallach, A Rhee, B Oliver, E Hughes

**Project Leaders:** J Kalman, K Colson

**Steering Sponsorship and Steering Committee:** D Adams, E Dupree, P Lamb, M McCarry, C Porter, D Reich
CABG SSI Reduction Patient Progression

Pre-Op
- DAS
- Inpatient

Peri-Op
- Holding
- OR

Post-Op
- CSICU
- Floor

Post-DC
- VNS Home Care for Open Heart Patients
Anesthesiology Supported Intra-Operative Evidence-Based Practices

- **Antibiotic Administration**
  - Analysis (Pre- and Post Available)
  - Automated Individual compliance reports to anesthesiologists
  - Automatic reminders in computer record keeping
  - Antibiotic compliance definitions posted in high visibility area

- **Glucose Control**
  - Faculty Survey re: revised protocol – 8/28/2013
  - Protocol and database developed – analysis underway
  - Protocol posted in high visibility area

- **Environmental and Equipment Improvements**
  - Additional hand hygiene dispensers placed next to anesthesia work station
  - High-level disinfectant solution mounted next to anesthesiology cart
  - Phones moved to wall mount and hooks placed on walls to keep equipment off floor
  - Two additional FTEs (anesthesiology tech’s) approved for cleaning critical equipment and for late night coverage
  - Mayo stand covers to complete drape central line tray
  - Modification to sterile ultrasound probe cleaning before handing off to surgeons in sterile field
    - Purchase approved, acquisition in process, protocol pending

- **Cardiac Surgery Red Blood Cell Transfusion Protocol**
  - Multidisciplinary roll out: February 27, 2013
  - Analysis of efficacy – retrospective data collection in process
  - Clarification of transfusion documentation
Perioperative Antibiotic SCIP Compliance Results

Note:
- Vancomycin antibiotic administration was changed from starting administration preoperatively, to starting the infusion in the OR holding area on 3/6/13.
Hot Key Reminders Moved to Earlier Time
Antibiotic Administration Protocol Posted in High Visibility Location
Dear Colleagues,

The following case/cases are non-compliant by our departmental compliance rules. You may addend the anesthetic record within 30 days of the service date only with specific case recollection. Thank you for your efforts towards these important measures as we continue to improve on the already excellent care we deliver.

Amanda

**CABG SSI Antibiotic Compliance Report**

<table>
<thead>
<tr>
<th>Date</th>
<th>MRN</th>
<th>Case</th>
<th>Vanc By Time</th>
<th>Vanc By Dose</th>
<th>Cef By Time</th>
<th>Cef By Dose</th>
<th>Last Esoph Temp</th>
<th>Last Bladder Temp</th>
<th>Glucose Mean</th>
<th>Glucose Median</th>
<th>Glucose Last</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-08-07</td>
<td>*</td>
<td>*</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>35.1</td>
<td>35.2</td>
<td>170</td>
<td>175</td>
<td>173</td>
</tr>
</tbody>
</table>

Confidentiality Notice: This email message, including any attachments, is for the sole use of the intended recipients and may contain confidential and/or privileged information. Any unauthorized review, use, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender by reply email, delete this message and destroy all copies thereof.

QA Work Product. This is a Privileged and Confidential Performance Improvement Correspondence. Prepared in accordance with New York State Public Health Law 2805 j through m, New York State Education Law 6527, and Federal Public Law 109-41.
Operating Room Environmental Improvements
Creative Hand Hygiene Promotion Approaches

Mount Sinai perioperative professional before hand hygiene

Same Mount Sinai perioperative professional after hand hygiene with alcohol-based sanitizer (wet contact for about 20 seconds).

"Foam In, Foam Out" on CT OR Cluster OR doors

ICP photos of cultures on petri dishes pre- and post-hand hygiene. Posted initially in CT ORs (April), expanded to Endoscopy, and all PACUs and OR Suites (July).
Your 5 moments for HAND HYGIENE

1. BEFORE PATIENT CONTACT
2. BEFORE ASEPTIC TASK
3. AFTER BODY FLUID EXPOSURE RISK
4. AFTER PATIENT CONTACT
5. AFTER CONTACT WITH PATIENT SURROUNDINGS

World Health Organization
Anesthesiology Hand Hygiene Challenges

Hands/gloves contaminated

Immediate need for another patient care activity? (i.e. is there adequate time to perform hand hygiene and reglove?)

Yes

Change gloves (avoid contamination of OR environment)*

No

Remove gloves, gel hands

* Hands are considered contaminated after glove removal. Gloves do not obviate the need for hand hygiene secondary to the incidence of glove failure and self-contamination rates on glove removal.

ASA Committee on Occupational Health Task Force on Infection Control: Recommendations for Infection Control for the Practice of Anesthesiology (Third Edition)
SWAT IP HH Compliance (May 13 – Nov 2013)

Note. SWAT numbers include observations from SWAT members and ICP validations.
SWAT CT-OR HH Compliance (May 23 – Nov 24, 2013)

Note. Compliance numbers include observations from SWAT members and ICP validations.
CABG SSI Reduction Patient Progression

**Pre-Op**
- DAS
- Inpatient

**Peri-Op**
- Holding
- OR

**Post-Op**
- CSICU
- Floor

**Post-DC**
- VNS Home Care for Open Heart Patients
Wound Care and Chest Tubes

- **Dressing care**
  - Checked daily
  - Arglaes ® Film Dressing (48 hours)
  - Meplix ® Dressing until discharge
  - Dressing removed and changed after shower

- **Chest tubes**
  - Try to take chest tubes out within 24 hours, if clinical status allows.
    - Showering occurs after chest tubes removed.
  - Chest tubes are removed before smaller, Blake drains.
  - Remain in place until epicardial pacing wires removed.
ICU Specific Interventions

- Hand hygiene
- Infection control precautions – gown and gloves
- Nursing SBAR sheet includes high risk identification
- Endocrinology derived glycemic control protocol
- Continued CLABSI initiatives
- EPIC flagging
Floor Specific Interventions

- Hand hygiene
- Infection control precautions – gown and gloves
- Placement of CABG patient in single room
- Endocrinology derived glycemic control protocol for the floor and at home
- Patient education “Speak up” program
- EPIC flagging
Suspect Wound Infection Identification Process

- Nurses or others report suspected infection to a “Watch list team” comprised of:
  - Surgeon
  - Infectious Disease Physician
  - Nurse
  - SSI leadership

- The patient is placed on the Watch list and discussed during CABG SSI working group meetings

- SSI Team team provides multidisciplinary unbiased analysis and provides confirmation or absence of infection.

- If the wound infection is confirmed, patient placed on Confirmed CABG SSI Infection list.
CABG SSI Reduction Patient Progression

Pre-Op
- DAS
- Inpatient

Peri-Op
- Holding
- OR

Post-Op
- CSICU
- Floor

Post-DC
- VNS Home Care for Open Heart Patients
MSMC-VNS Partnership: Sternal Wound Program

- **General Plan**
  - All open heart surgery patients get home care
  - If criteria is met for subacute rehabilitation facility:
    - Subacute rehab or VNSNY intensive rehabilitation at home program
    - Launched March 4, 2013. 244 patients enrolled (March 2013 – July 31st)
    - Evaluating if increase in Mount Sinai patients discharged home with home care.

- **VNSNY Collaboration**
  - Education of nursing leadership on overall wound care
    - Leaders educated VNSNY staff
  - Collaboration on better communication if suspected wound infection present for more rapid evaluation and treatment response
  - Often, VNSNY nurse evaluates wound in the hospital
  - If wound infection is suspected, VNSNY takes a picture and sends to surgeon’s office.
  - Diabetic management integrated into routine follow up care
Sustainability Plans and Spread

• Sustainability
  – Regular working group meetings
  – Physician engagement @ M&M meeting
  – OR EOC walk-throughs and Bio burden testing
  – Competency assessment of cleaning personnel
  – SWAT team hand hygiene observations
  – Anesthesiology report cards
  – Epic high risk flagging

• Spread
  – Overall goal: Use what we learned decreasing CABG SSI initiatives to further reduce infection in other specialties.
  – Expand anesthesiology antibiotic compliance initiatives to other specialties
  – Expand hand hygiene initiatives to the entire operative area
  – Expand environmental care initiatives
  – Team STEPPS
  – Hand hygiene technology
Red arrow represents the effects of a culmination of multiple concurrent surgical site infection reduction interventions.

*) LCL is negative and is not shown
Statistical Analysis:
- Adjusted effect of collective interventions to reduce odds of SSI is significant.
- Female gender and diabetes are associated with increased odds of SSI.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Value</th>
<th>Reference</th>
<th>Estimate</th>
<th>OR</th>
<th>LCLM 95%</th>
<th>UCLM 95%</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-3.152</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intervention</td>
<td>-0.886</td>
<td></td>
<td>0.412</td>
<td>0.205</td>
<td>0.828</td>
<td>0.0129</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-0.010</td>
<td></td>
<td>0.990</td>
<td>0.960</td>
<td>1.020</td>
<td>0.5004</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>1.316</td>
<td></td>
<td>3.728</td>
<td>1.990</td>
<td>6.985</td>
<td>0.0045</td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td>ASIAN (PACIFIC ISLANDER)</td>
<td>-0.817</td>
<td>0.442</td>
<td>0.057</td>
<td>3.450</td>
<td>0.4415</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BLACK</td>
<td>-0.076</td>
<td>0.927</td>
<td>0.361</td>
<td>2.378</td>
<td>0.875</td>
</tr>
<tr>
<td></td>
<td></td>
<td>HISPANIC</td>
<td>-0.376</td>
<td>0.687</td>
<td>0.146</td>
<td>3.224</td>
<td>0.6368</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OTHER</td>
<td>-0.120</td>
<td>0.887</td>
<td>0.426</td>
<td>1.844</td>
<td>0.75</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UNKNOWN</td>
<td>-0.796</td>
<td>0.451</td>
<td>0.060</td>
<td>3.377</td>
<td>0.4436</td>
</tr>
<tr>
<td>CABG and VALVE</td>
<td></td>
<td>Only CABG</td>
<td>-0.117</td>
<td>0.890</td>
<td>0.434</td>
<td>1.824</td>
<td>0.7501</td>
</tr>
<tr>
<td>ALCOHOL</td>
<td>0.739</td>
<td></td>
<td>2.093</td>
<td>0.274</td>
<td>15.991</td>
<td>0.4766</td>
<td></td>
</tr>
<tr>
<td>ANEMDEF</td>
<td>0.093</td>
<td></td>
<td>1.097</td>
<td>0.525</td>
<td>2.292</td>
<td>0.8057</td>
<td></td>
</tr>
<tr>
<td>BLDLOSS</td>
<td>1.826</td>
<td></td>
<td>6.210</td>
<td>0.672</td>
<td>57.405</td>
<td>0.1078</td>
<td></td>
</tr>
<tr>
<td>CHF</td>
<td>0.689</td>
<td></td>
<td>1.992</td>
<td>0.360</td>
<td>11.024</td>
<td>0.4301</td>
<td></td>
</tr>
<tr>
<td>CHRN Lung</td>
<td>-0.041</td>
<td></td>
<td>0.960</td>
<td>0.458</td>
<td>2.014</td>
<td>0.9145</td>
<td></td>
</tr>
<tr>
<td>COAG</td>
<td>-0.507</td>
<td></td>
<td>0.602</td>
<td>0.233</td>
<td>1.556</td>
<td>0.2953</td>
<td></td>
</tr>
<tr>
<td>DEPRESS</td>
<td>0.214</td>
<td></td>
<td>1.238</td>
<td>0.412</td>
<td>3.716</td>
<td>0.7035</td>
<td></td>
</tr>
<tr>
<td>DM</td>
<td>0.771</td>
<td></td>
<td>2.162</td>
<td>1.079</td>
<td>4.333</td>
<td></td>
<td>0.0299</td>
</tr>
<tr>
<td>DMCX</td>
<td>0.397</td>
<td></td>
<td>1.487</td>
<td>0.481</td>
<td>4.605</td>
<td>0.4911</td>
<td></td>
</tr>
<tr>
<td>HTN C</td>
<td>-0.084</td>
<td></td>
<td>0.920</td>
<td>0.373</td>
<td>2.267</td>
<td>0.8559</td>
<td></td>
</tr>
<tr>
<td>HYPOTHY</td>
<td>-1.082</td>
<td></td>
<td>0.339</td>
<td>0.094</td>
<td>1.226</td>
<td>0.0993</td>
<td></td>
</tr>
<tr>
<td>LTYES</td>
<td>0.180</td>
<td></td>
<td>1.197</td>
<td>0.658</td>
<td>2.178</td>
<td>0.5555</td>
<td></td>
</tr>
<tr>
<td>NEURO</td>
<td>-1.841</td>
<td></td>
<td>0.159</td>
<td>0.018</td>
<td>1.388</td>
<td>0.0964</td>
<td></td>
</tr>
<tr>
<td>OBESE</td>
<td>0.436</td>
<td></td>
<td>1.547</td>
<td>0.779</td>
<td>3.069</td>
<td>0.2125</td>
<td></td>
</tr>
<tr>
<td>PARA</td>
<td>1.031</td>
<td></td>
<td>2.803</td>
<td>0.773</td>
<td>10.163</td>
<td>0.1171</td>
<td></td>
</tr>
<tr>
<td>PERIVASC</td>
<td>-0.150</td>
<td></td>
<td>0.861</td>
<td>0.411</td>
<td>1.803</td>
<td>0.6919</td>
<td></td>
</tr>
<tr>
<td>PSYCH</td>
<td>0.746</td>
<td></td>
<td>2.109</td>
<td>0.212</td>
<td>20.947</td>
<td>0.5243</td>
<td></td>
</tr>
<tr>
<td>PULMCIRC</td>
<td>-1.702</td>
<td></td>
<td>0.182</td>
<td>0.012</td>
<td>2.745</td>
<td>0.2189</td>
<td></td>
</tr>
<tr>
<td>RENFAIL</td>
<td>0.106</td>
<td></td>
<td>1.111</td>
<td>0.532</td>
<td>2.323</td>
<td>0.7789</td>
<td></td>
</tr>
<tr>
<td>ULCER</td>
<td>0.000</td>
<td></td>
<td>1.000</td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VALVE</td>
<td>1.687</td>
<td></td>
<td>5.402</td>
<td>0.628</td>
<td>46.441</td>
<td>0.1247</td>
<td></td>
</tr>
<tr>
<td>WGHTLOSS</td>
<td>0.189</td>
<td></td>
<td>1.207</td>
<td>0.508</td>
<td>2.871</td>
<td>0.6698</td>
<td></td>
</tr>
</tbody>
</table>
New York State Department of Health

49% Relative reduction of Chest SSI from 2011 to 2013

Elimination of Donor Surgical Site Infection
New York State Department of Health CLABSI Rates

NYSDOH Hospital Acquired Infection Report for Mount Sinai
NHSN Data through Sept 2013, downloaded 12/07/2013.

### Coronary ICU CLABSI Rates

<table>
<thead>
<tr>
<th>Reporting Year</th>
<th>Number of CLDays</th>
<th>Number of CLABSI</th>
<th>Contam. Deleted</th>
<th>Rate (95% CI)</th>
<th>Compared to NYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>1,617</td>
<td>3</td>
<td>0</td>
<td>1.9 (0.4-5.4)</td>
<td>No difference</td>
</tr>
<tr>
<td>2010</td>
<td>1,919</td>
<td>3</td>
<td>0</td>
<td>1.6 (0.3-4.6)</td>
<td>No difference</td>
</tr>
<tr>
<td>2011</td>
<td>1,947</td>
<td>4</td>
<td>0</td>
<td>2.1 (0.6-5.3)</td>
<td>No difference</td>
</tr>
<tr>
<td>2012</td>
<td>2,130</td>
<td>3</td>
<td>0</td>
<td>1.4 (0.3-4.1)</td>
<td>No difference</td>
</tr>
<tr>
<td>2013</td>
<td>1,342</td>
<td>0</td>
<td>NA</td>
<td>0.0 (0.0-2.2)</td>
<td>No difference</td>
</tr>
</tbody>
</table>

### Cardiothoracic ICU CLABSI Rates

<table>
<thead>
<tr>
<th>Reporting Year</th>
<th>Number of CLDays</th>
<th>Number of CLABSI</th>
<th>Contam. Deleted</th>
<th>Rate (95% CI)</th>
<th>Compared to NYS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>3,453</td>
<td>9</td>
<td>0</td>
<td>2.6 (1.2-4.9)</td>
<td>No difference</td>
</tr>
<tr>
<td>2008</td>
<td>3,796</td>
<td>6</td>
<td>1</td>
<td>1.6 (0.6-3.4)</td>
<td>No difference</td>
</tr>
<tr>
<td>2009</td>
<td>3,841</td>
<td>7</td>
<td>0</td>
<td>1.8 (0.7-3.8)</td>
<td>No difference</td>
</tr>
<tr>
<td>2010</td>
<td>3,423</td>
<td>4</td>
<td>0</td>
<td>1.2 (0.3-3.0)</td>
<td>No difference</td>
</tr>
<tr>
<td>2011</td>
<td>3,789</td>
<td>5</td>
<td>0</td>
<td>1.3 (0.4-3.1)</td>
<td>No difference</td>
</tr>
<tr>
<td>2012</td>
<td>3,619</td>
<td>5</td>
<td>0</td>
<td>1.4 (0.4-3.2)</td>
<td>No difference</td>
</tr>
<tr>
<td>2013</td>
<td>2,649</td>
<td>4</td>
<td>NA</td>
<td>1.5 (0.4-3.9)</td>
<td>No difference</td>
</tr>
</tbody>
</table>
**SCIP 9 and VTE-2**

- **SCIP 9 – Urinary Catheter Removal Postop Clinical Practice**
  - Clinician education
  - Electronic reminder screen saver
  - Electronic order set
  - Standing order to remove urinary catheters the morning of post operative day 1 unless a valid medical reason is documented

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Compliance %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1q2012</td>
<td>83%</td>
</tr>
<tr>
<td>2q2012</td>
<td>84%</td>
</tr>
<tr>
<td>3q2012</td>
<td>88%</td>
</tr>
<tr>
<td>4q2012</td>
<td>94%</td>
</tr>
<tr>
<td>1q2013</td>
<td>96%</td>
</tr>
<tr>
<td>2q2013</td>
<td>98%</td>
</tr>
<tr>
<td>3q2013</td>
<td>98%</td>
</tr>
<tr>
<td>4q2013</td>
<td>100%</td>
</tr>
</tbody>
</table>

![Core Measure: SCIP Compliance Chart](chart.png)
SCIP 9 and VTE-2

- SCIP VTE - 2: Adult Surgery Patients who Received Appropriate Venous Thromboembolism Prophylaxis
  - Clinician Education
  - Electronic order set

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Percent VTE Prophylaxis received</th>
</tr>
</thead>
<tbody>
<tr>
<td>1q2012</td>
<td>99.1%</td>
</tr>
<tr>
<td>2q2012</td>
<td>99.2%</td>
</tr>
<tr>
<td>3q2012</td>
<td>98.3%</td>
</tr>
<tr>
<td>4q2012</td>
<td>99.2%</td>
</tr>
<tr>
<td>1q2013</td>
<td>100%</td>
</tr>
<tr>
<td>2q2013</td>
<td>98.3%</td>
</tr>
<tr>
<td>3q2013</td>
<td>99.2%</td>
</tr>
<tr>
<td>4q2013</td>
<td>98%</td>
</tr>
</tbody>
</table>
What Did We Learn Overall?

• Support from administration and leadership is key to success

• Continuous real time reporting is effective.

• Use electronic records, automatic emails for compliance reports, and technology to assist improvement.

• If possible, start smaller first. Then spread.

• Sustainability plans are key to maintained success.

• If at first you don’t succeed, try, try, again.
Thank You

Acknowledgements

David Reich
Andrew Leibowitz
Ingrid Hollinger
Yaakov Beilin
Eileen Hughes
Janet Rosado
Suzanne Martz
Kathryn Colson
Jill Kalman
Bernice Gordon
Victoria Aquino
Hospital Panel Discussion

David Feldman, MD, MBA, CPE, FACS
Michael Timoney, MD, FACS
Pamela Lupfer, RN, MSN
Denise Bartosz, RRT, BS
Next Steps

- Upcoming Webinars:
  - **Thursday, March 20, 2014, 7:00 – 8:00 a.m.**
  - Interventions to enhance OR safety across the OR continuum