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- **This event is being recorded.**

Troubleshooting Audio

Audio from computer speakers breaking up?

Audio suddenly stop?

Click Refresh icon
– or –
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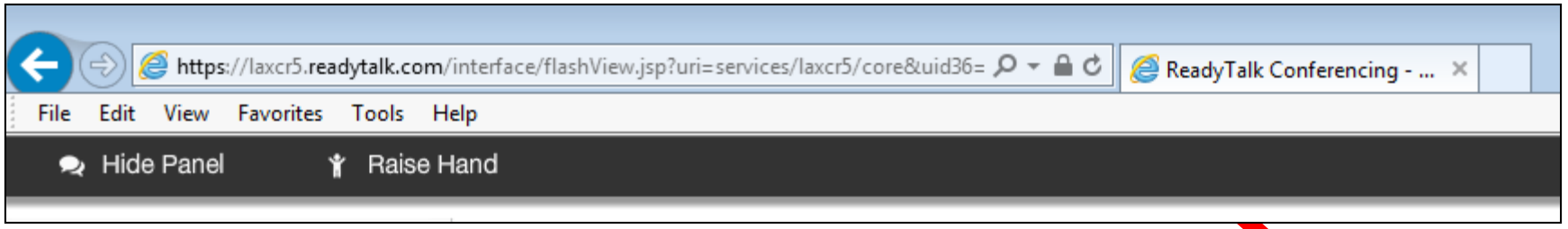
F5 Key
Top Row of Keyboard



Location of Buttons

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Troubleshooting Echo

- **Hear a bad echo on the call?**
- **Echo is caused by multiple browsers/tabs open to a single event—multiple audio feeds.**
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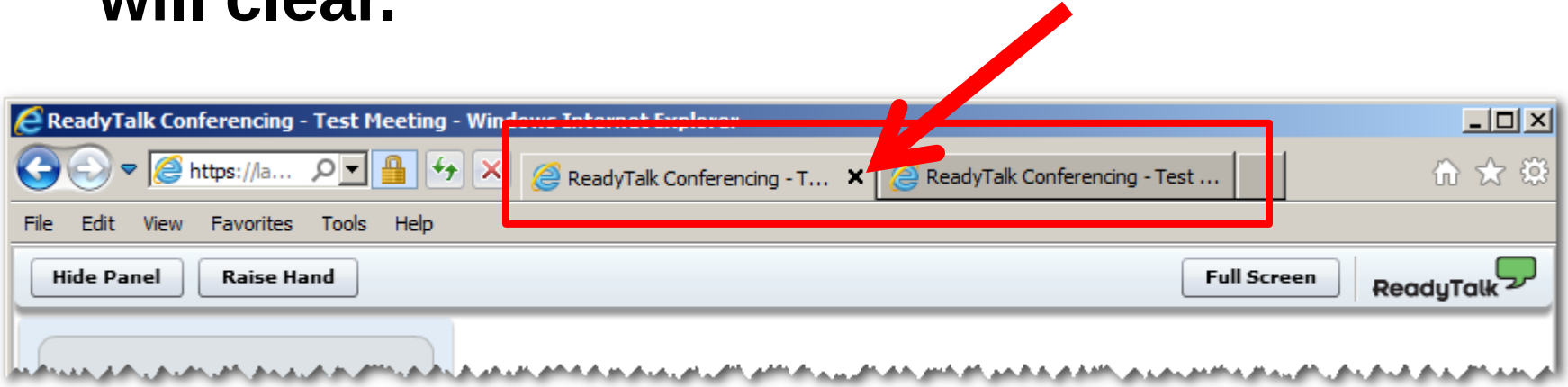

Example of Two Browsers Tabs open in Same Event

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Hospital Improvement Innovation Networks and Hospitals Collaboration to Improve Quality of Care: Healthcare-Associated Infections

November 28, 2017

Speakers

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Moderators

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Outreach and Education Support Contractor (SC)

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Purpose

This event will provide an overview of how the HIINs work at the regional, state, national, as well as hospital-system level to sustain and accelerate national progress and momentum toward continued harm reduction in the Medicare Program. The HIINs and their hospitals will share their solutions and processes to lower incidence of three HAIs.

Objectives

Participants will be able to perform the following:

- Apply initiatives and activities to improve patient safety
- Identify tools to achieve quality-measurement goals
- Recall the systems and protocols implemented by hospitals to monitor progress for HAI measures

Acronyms and Abbreviations

ADE	Adverse Drug Events	**HAI**	hospital-acquired infection	**OABP**	oral antibiotic bowel preparation
AM	morning	**HANYS**	Healthcare Association of New York State	**PACU**	post-anesthesia care unit
ATB	antibiotic	**HbA-1C**	glycated hemoglobin	**PAT**	preadmission testing
BMI	body mass index	**HCAHPS**	Hospital Consumer Assessment of Healthcare Providers and Systems	**PDSA**	Plan-Do-Study-Act
CAUTI	Catheter-Associated Urinary Tract Infection	**HIIN**	Hospital Improvement Innovation Network	**PFE**	Person and Family Engagement
CDI	*Clostridium difficile* Infection (*C. difficile*)	**HRET**	Health Research & Educational Trust	**PFP-BSI**	Partnership for Patients-Blood Stream Infections
CE	continuing education	**ICU**	intensive care unit	**PI**	performance improvement
CHG	change	**ID**	infectious disease	**POD**	post operative day
		IV	intravenous	**RCA**	root cause analysis
CLABSI	Central Line-Associated Blood Stream Infections	**MBP**	mechanical bowel preparation	**SSI**	surgical site infection
CLIP	Central Line Insertion Practices	**MR**	medical record	**SCHA**	South Carolina Hospital Association
CMS	Centers for Medicare & Medicaid Services	**MRSA**	Methicillin-Resistant *Staphylococcus aureus*	**SIR**	standardized infection ratio
COPD	chronic obstructive pulmonary disease	**MSB**	maximal sterile barrier	**T**	temperature
ED	emergency department	**NHSN**	National Healthcare Safety Network	**TPN**	total parenteral nutrition
EMR	electronic medical records	**NICU**	neonatal intensive care unit	**UTI**	urinary tract infection
ERAS	enhanced recovery after surgery	**N.B.**	nota bene (note well)	**VAE**	Ventilator-Associated Events
EVS	environmental services	**NSQIP**	National Surgical Quality Improvement Program	**VTE**	Venous Thromboembolism
FiO_2	fraction of inspired oxygen	**NYSPFP**	New York State Partnership for Patients	**Q**	quarter
GNYHA	Greater New York Hospital Association	**NYC H+H**	NYC Health + Hospitals	**QIN-QIO**	Quality Innovation Network - Quality Improvement Organization

HAI Mapping and Measure Exception Form Reminders

HAI Event	CDC Location(s)		
CLABSI	☐ IN:ACUTE:CC:B	☐ IN:ACUTE:CC:PNATL	☐ IN:ACUTE:CC:MS_PED
	☐ IN:ACUTE:CC:C	☐ IN:ACUTE:CC:R	☐ IN:ACUTE:CC_STEP:NURS
	☐ IN:ACUTE:CC:M	☐ IN:ACUTE:CC:CT	☐ IN:ACUTE:CC:NURS
	☐ IN:ACUTE:CC:MS	☐ IN:ACUTE:CC:S	☐ IN:ACUTE:WARD:M
	☐ IN:ACUTE:CC:N	☐ IN:ACUTE:CC:T	☐ IN:ACUTE:WARD:MS
	☐ IN:ACUTE:CC:NS	☐ IN:ACUTE:CC:ONC_PED	☐ IN:ACUTE:WARD:S
	☐ IN:ACUTE:CC:ONC_M	☐ IN:ACUTE:CC:B_PED	☐ IN:ACUTE:WARD:M_PED
	☐ IN:ACUTE:CC:ONC_S	☐ IN:ACUTE:CC:CT_PED	☐ IN:ACUTE:WARD:MS_PED
	☐ IN:ACUTE:CC:ONC_MS	☐ IN:ACUTE:CC:M_PED	☐ IN:ACUTE:WARD:S_PED
CAUTI	☐ IN:ACUTE:CC:B	☐ IN:ACUTE:CC:ONC_MS	☐ IN:ACUTE:CC:CT_PED
	☐ IN:ACUTE:CC:C	☐ IN:ACUTE:CC:PNATL	☐ IN:ACUTE:CC:M_PED
	☐ IN:ACUTE:CC:M	☐ IN:ACUTE:CC:R	☐ IN:ACUTE:CC:MS_PED
	☐ IN:ACUTE:CC:MS	☐ IN:ACUTE:CC:CT	☐ IN:ACUTE:WARD:M
	☐ IN:ACUTE:CC:N	☐ IN:ACUTE:CC:S	☐ IN:ACUTE:WARD:MS
	☐ IN:ACUTE:CC:NS	☐ IN:ACUTE:CC:T	☐ IN:ACUTE:WARD:S
	☐ IN:ACUTE:CC:ONC_M	☐ IN:ACUTE:CC:ONC_PED	☐ IN:ACUTE:WARD:M_PED
	☐ IN:ACUTE:CC:ONC_S	☐ IN:ACUTE:CC:B_PED	☐ IN:ACUTE:WARD:MS_PED
			☐ IN:ACUTE:WARD:S_PED

If your hospital does not have at least one of the device-associated HAI reportable locations listed above, then your hospital **must** submit an **IPPS Measure Exception Form** with CMS in order to successfully meet HAI reporting requirements. The form, available through *QualityNet*, allows a facility to indicate that, in accordance with NHSN location definitions, it has no qualifying intensive care unit (ICU) or adult or pediatric medical (M), surgical (S), or medical/surgical (MS) ward locations. Questions regarding the CMS IPPS Measure Exception Form should be directed to the *QualityNet* Hospital-Inpatient Questions and Answers Tool: https://cms-ip.custhelp.com/.

IPPS Measure Exception Form:
https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier2&cid=1138115987129

NHSN Location Mapping Resource and Checklist:
https://www.qualitynet.org/dcs/ContentServer?c=Page&pagename=QnetPublic%2FPage%2FQnetTier2&cid=1228760487021

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CLABSI: Getting to Zero

About Us

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Premier HIIN: Partnership for Patients HIIN Initiative

Premier is one of 16 HIINs for the CMS National Partnership for Patients Initiative

Two Overarching Goals

- 20% reduction in all-cause harm
- 12% reduction in 30-day all-cause readmissions

Across 11 Harm Event Areas		Other Topic Areas of Focus
Adverse Drug Events (ADE)	Injury from Falls	All Cause Harm
Catheter-Associated Urinary Tract Infections (CAUTI)	Pressure Ulcers	Airway Safety
Central Line Associated Blood Stream Infections (CLABSI)	Preventable Readmissions	Methicillin-Resistant *Staphylococcus aureus* (MRSA)
Clostridium difficile Infections (CDI) and Antibiotic Stewardship	Sepsis and Septic Shock	Person and Family Engagement (PFE)
	Surgical Site Infections (SSI)	Health Disparities
	Venous Thromboembolism (VTE)	Leadership and Safety Culture
	Ventilator-Associated Events (VAE)	

Premier HIIN provides hospitals with the following:

- Initiatives and strategies to improve patient safety
- Safety across the board programmatic approach
- Collaborative learning and networking opportunities

Premier HIIN

One Team–One Voice

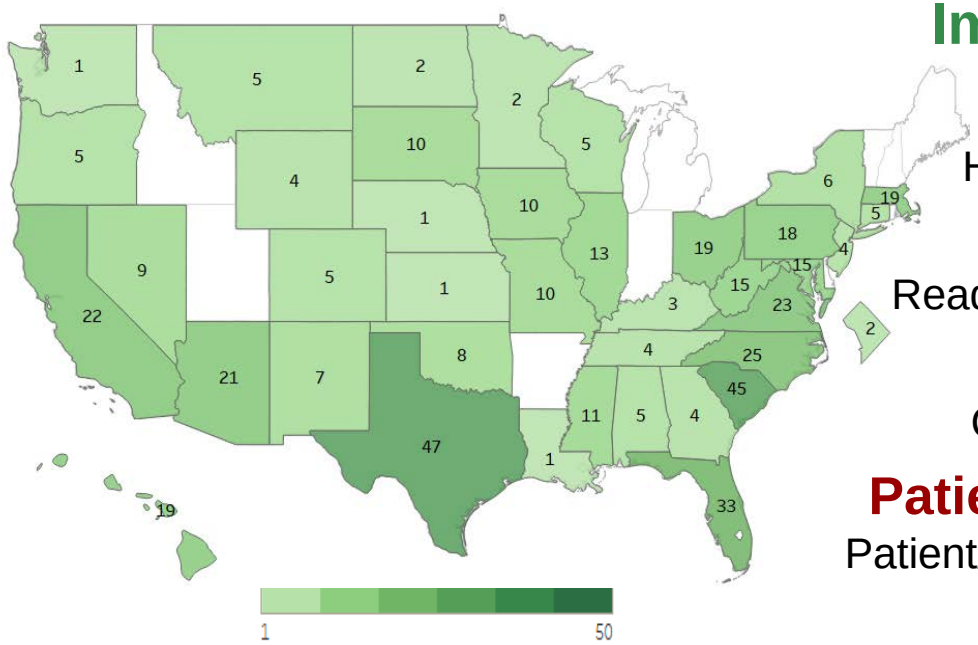
Transforming Healthcare Together

Across 40 States

489 Hospitals

Diversity of Types

- Academic
- Community
- Critical Access
- Indian Health Servi
- Large Urban
- Small Rural
- Teaching



Improvement

Safety
Harms Avoided

Quality
Readmissions Avoided

Cost
Costs Avoided

Patient Experience
Patient/Family Engagement

Team: Premier HIIN leaders, Premier HIIN partners, hospitals, QIN-QIOs, patients/families, industry experts, and other key stakeholders

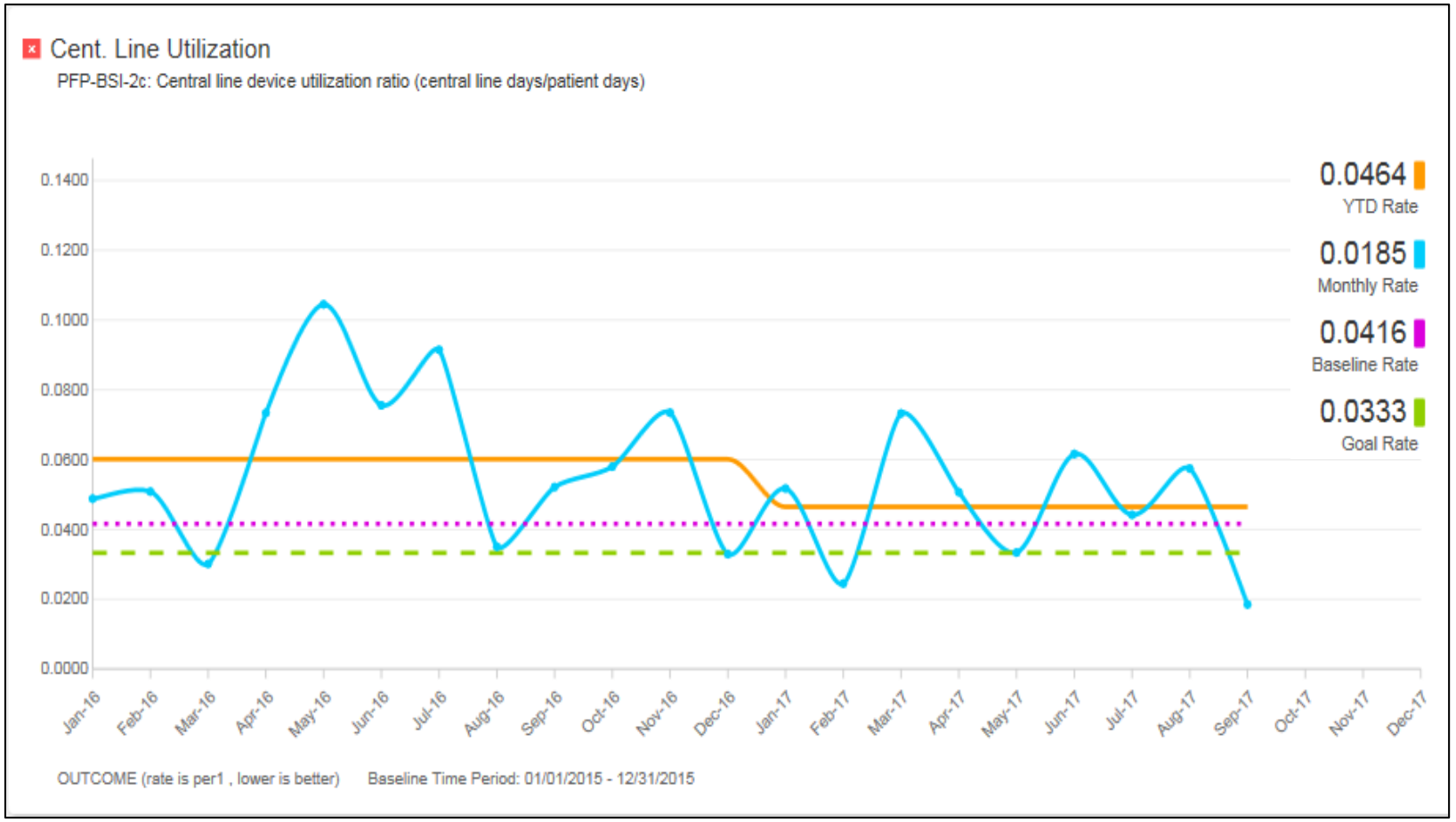
Greer Memorial Hospital

- Part of the Greenville Health System — seven acute care facilities and two long-term care facilities
- Magnet designated — 82-bed acute care facility with medical surgical services
- Operating room with minimally invasive surgeries, plastics, general, orthopedics
- Emergency department
- Women and children’s services

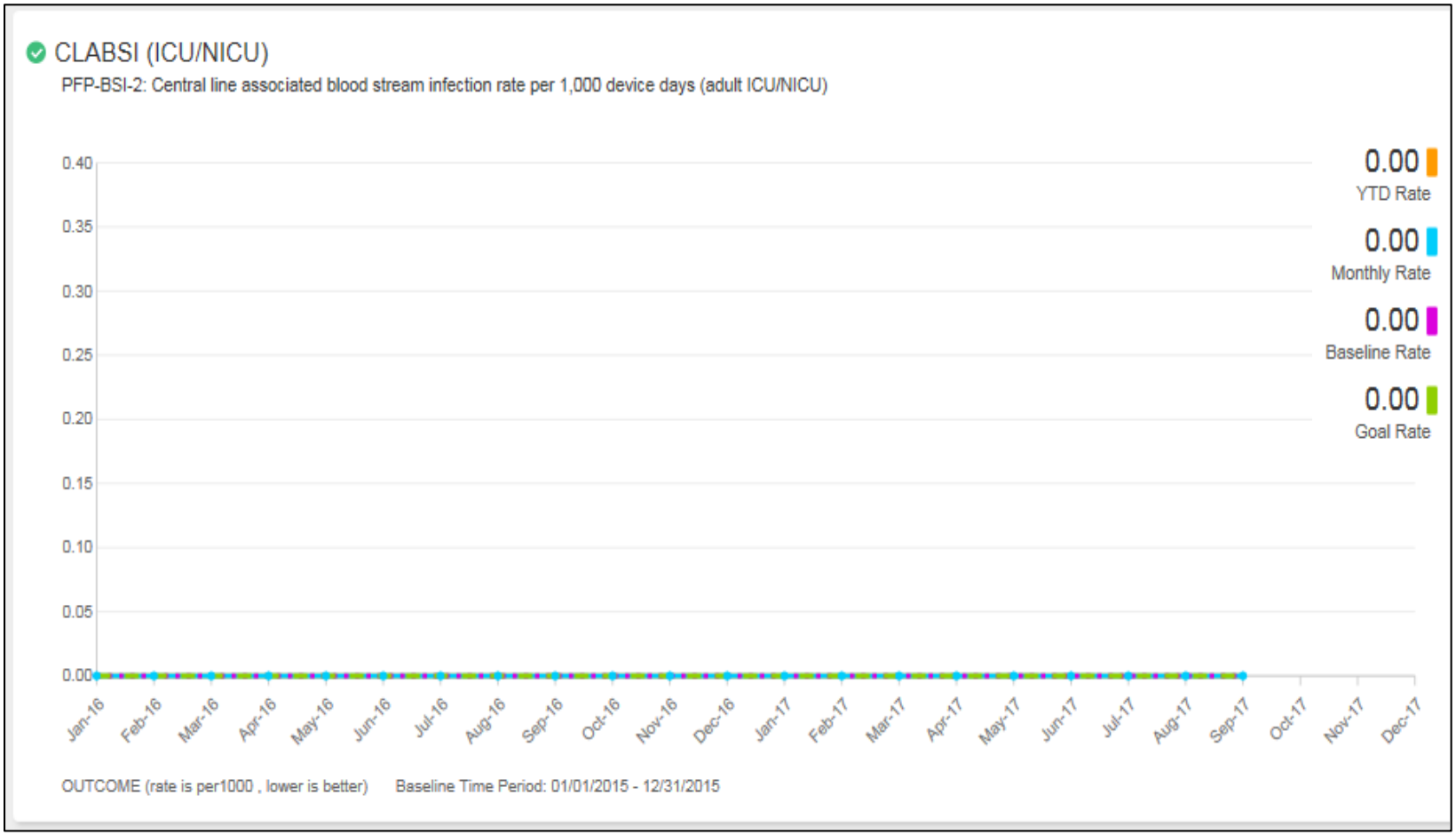
Greer Memorial Hospital Culture of Safety

- Full-service community hospital
- 93% Culture of Safety Survey participation
- SC safe care commitment to high reliability
- Safe surgery certification
- SCHA Zero-Harm Awards for CLABSI and SSI
- Magnet designation
- Focus on patient and family engagement
- $100 million cost removal initiative
- Safety and quality goals set at zero harm/zero defects
- Daily safety huddle led by campus senior leadership
- Leadership and staff accountability
- Just culture
- HCAHPS Five-Star Rating
- Leapfrog Group A Safety Score

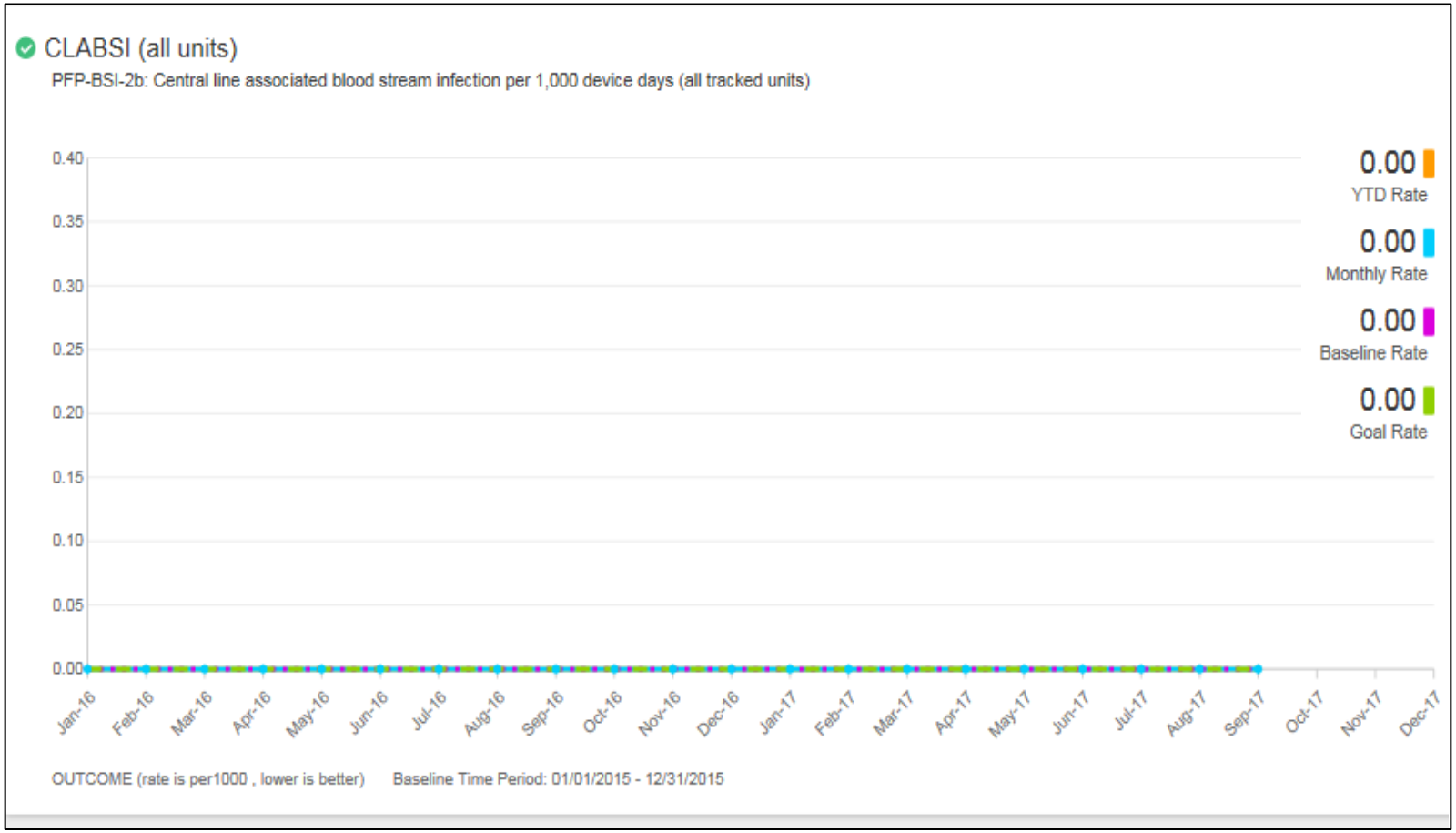
Central Line Utilization



CLABSI Rate (ICU/NICU)



CLABSI Rate (All Units)



Get to Zero — Stay at Zero

Do It Now

Multidisciplinary Approach

- Healthcare professionals who order insertions and removals
- Personnel who insert and maintain central lines
- Infection prevention
- Infusion specialists or IV teams
- Healthcare managers and executives (those who allocate resources)
- Patients who are capable of assisting in the care of their catheters (patient and family engagement)

Facilitating Proper Practices

- **Bundling** all needed supplies in one area (e.g., a **standardized** cart or a kit) helps ensure items are available for use.
- **Using a checklist** to ensure all components of the central line insertion and maintenance practices are followed; this is not only an evidence-based best practice, it is a CMS requirement.
- **Empowering staff** to stop a nonemergent line insertion if proper procedures are not followed or if any components of the CLIP bundle are not followed.

Primary Interventions for Prevention

- Always assess line necessity; ask the question daily
  - Does the patient really need the line?
  - Frequent blood draws alone aren't a sufficient reason unless the patient has no peripheral access.
  - The central line needs to be best for patient, not for convenience.
- Indications for use
  - Prolonged intravenous medical treatment (antibiotics, etc.)
  - Nutritional support (TPN, lipids)
  - Chemotherapy
  - Hemodialysis
- Central line catheters may also be used for the following:
  - Blood transfusions
  - Patients who have difficulty receiving a peripheral IV line

Primary Interventions for Prevention

- Provide education to patient and family prior to insertion; this should be documented in the medical record
- Practice hand hygiene
- Adhere to aseptic technique
- Perform appropriate skin prep and allow to dry
- Follow maximal sterile barrier (MSB) technique; all staff within three feet of the sterile procedure must have donned MSB
- Cover site with sterile transparent dressing

***Any** missing component indicates nonadherence and is opportunity for improvement.*

Secondary Interventions

- CLABSI PI task force for drill down on each event
- Discuss central line utilization and best practices in daily patient safety huddles and interdisciplinary rounds
- CHG bathing on patients with central lines
- Minimize blood draws from central lines; obtain labs peripherally, when possible
- Chlorhexidine-impregnated dressings — may also be used
- Antimicrobial-antiseptic impregnated catheters — may be appropriate for catheters expected for greater than five days **and** when **core** strategies have not decreased CLABSI rates

Unique Interventions for Consideration

- New-hire probation period — every line access and dressing change audited for 90 days
- Education for ancillary staff-radiology access central lines, Home Health Care Nurses — RCA led to this intervention
- Routine maintenance bundle compliance audits
- Unit score cards with rates, device utilization, hand hygiene compliance, etc.

Prevent CLABSI

Clean hands

Look at the device (Dressing intact? BIOPATCH® in place?)

Audit for appropriate insertion practices

Bathe the patient

Scrub the hub

Is the line necessary?

Be Empowered

- Zero is possible
- Follow evidence-based guidelines
- Hold staff accountable
- Think outside the box
- Inspect what you expect
- Leadership culture of safety
- Safety across the board

New York State Partnership for Patients

Wing Lee, MBBS, MPH
Senior Project Manager

Maria Sacco, RRT, CPHQ
Program Manager

Using a Bundled Approach to Reduce SSIs

NYSPFP HIIN Overview

Healthcare Association of New York State (HANYS)

Greater New York Hospital Association (GNYHA)

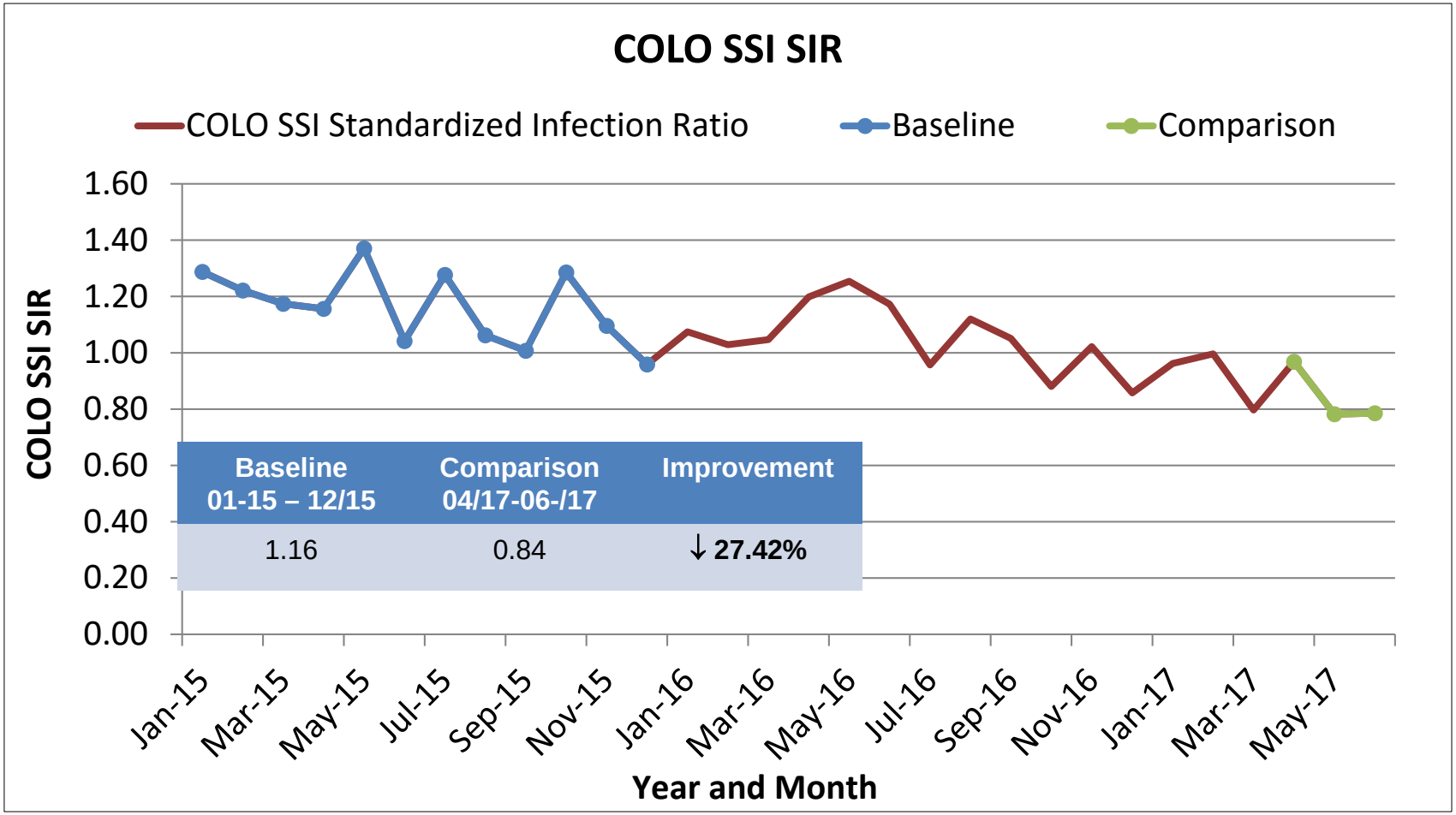
IPRO

More than 170 Hospitals
More than 15 Project Managers

Why Focus on SSIs?

- 2.6% of 30 million operations per year are complicated by SSIs (800,000 to 2 million SSIs annually)
- SSI accounts for 38% of HAI in surgical patients
- Colorectal surgery SSI rate varies from 5% to 30%
- SSIs are associated with the following:
  - Increased length of stay
  - Increased hospital costs (estimated increase of $1,300 to $5,000 per case)
  - Increased patient morbidity and mortality
  - Increased readmission rates

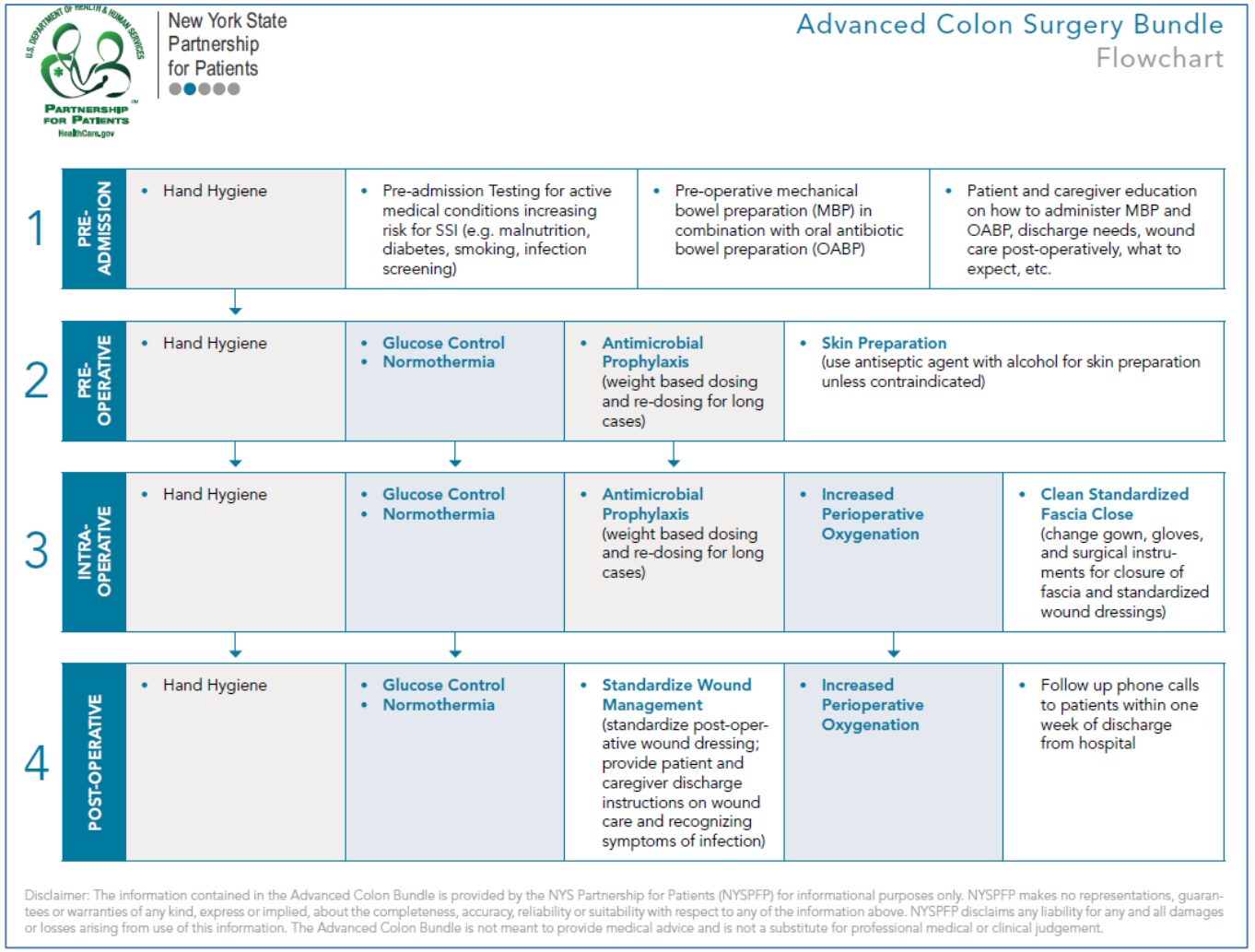
NYSPFP SSI SIR: Colon



NYSPFP Advanced Colon Bundle Elements

- Normothermia
- Glucose Control
- Antimicrobial Prophylaxis
- Increased Perioperative Oxygenation
- Skin Preparation
- Clean Standardized Fascia Close
- Wound Management
- **New** Mechanical Bowel Preparation in Combination with Oral Antibiotics

Advanced Colon Surgery Bundle Flowchart



Advanced Colon Surgery Bundle Summary Table

New York State Partnership for Patients

Advanced Colon Surgery Bundle
Summary Table

ESSENTIAL BUNDLE ELEMENT	STRATEGIES FOR APPLICATION OF BUNDLE ELEMENT
Pre-operative Mechanical Bowel Preparation Combined with Oral Antibiotics*	• For patients undergoing elective bowel surgery, establish standardized pre-operative mechanical bowel preparation regimen combined with pre-operative oral antibiotics the day prior to surgery. • Mechanical bowel preparation in combination with oral antibiotics prior to surgery should be used in addition to standard intravenous antibiotic prophylaxis pre-operatively.
Antimicrobial Prophylaxis Maintain therapeutic levels of the prophylactic antimicrobial agent in serum and tissues throughout the operation, using weight-based dosing and re-dosing as appropriate.	• Standardize prophylactic antibiotic protocols, with additional guidance on weight-based dosing and re-dosing for long cases based on the half-life of the selected antibiotic. • Administer weight-based antibiotics within 1 hour prior to surgical incision. (N.B. Vancomycin or a fluoroquinolone should be administered within 60-120 minutes before the initial incision due to the longer infusion time required for these antimicrobials). • Re-dosing for long cases based on half-life of drug used or when there is excessive blood loss. • Prophylactic antibiotics discontinued within 24 hours after surgery end time (48 hours for cardiac surgery).
Skin Preparation Use an antiseptic agent with alcohol for skin preparation unless contraindicated	• Use chlorhexidine gluconate with isopropyl alcohol or iodine povacrylex with alcohol (70%) to prepare skin prior to surgery. • Allow skin to dry completely prior to application of adhesive drapes to ensure good adhesion and to reduce fire risk. • Standardize processes for hair removal prior to surgery. If hair removal is required, use clippers. (N.B. razor or depilatory creams should not be used.)
Normothermia Maintain core temperature ≥ 36°C during the perioperative period	• Standardize warming interventions and protocols in both the pre-operative holding area, OR, and PACU. • Active warming of patients (e.g., Bair hugger) in the holding area to reduce risk of inadvertent hypothermia for patients with temperature ≤ 36°C. • Check temperature prior to entering the operating room. Check every 15 minutes intra-operatively. Check immediately upon arrival in PACU and every 30 minutes until discharge from PACU. • Use of warmed IV fluids in the OR.
Glucose Control Maintain blood glucose level < 200 mg/dl on the day of surgery and through the postoperative period	• Establish glucose control protocols for use throughout peri-operative operative process. • Identify known diabetics and potential hyper-glycemics in the Pre-admission testing (PAT). Work with endocrinologist to reduce HbA-1C for known diabetics. • Frequent monitoring of blood glucose (all patients, both known diabetics and non-diabetics) beginning in the pre-operative holding area, in the OR, in the PACU, and on all units. Institute glucose management protocol (e.g. Basal bolus or standard protocol insulin delivery for blood glucose > 200 mg/dl).

ADVANCED COLORECTAL SURGERY BUNDLE SUMMARY TABLE *continued*

ESSENTIAL BUNDLE ELEMENT	STRATEGIES FOR APPLICATION OF BUNDLE ELEMENT
Increased Perioperative Oxygenation Maintain optimal tissue oxygenation throughout perioperative period by administering supplemental oxygen at intra-operatively and post-operatively	• In patients with normal pulmonary function administer increased FiO_2, (e.g., up to 0.80 FiO_2) intra-operatively and post-operatively while in PACU or for 2 hours in the receiving unit, in combination with strategies to optimize tissue oxygenation through maintenance of perioperative normothermia and adequate volume replacement.
Clean Standardized Fascia Close Change gown, gloves, and surgical instruments for closure of fascia	• Surgeon announces time to close to indicate necessity for change of gowns, gloves, and closing trays. • Ensure clean closing trays and instruments are available for closing of fascia. • Standardize closing of abdominal wound (e.g. with a subcuticular closure except type IV cases, where skin is left partially open).
Wound Management Standardize wound management strategy for all types of colorectal surgeries.	• Standardize intra-operative application of wound dressing to reduce risk of contamination and maximize wound healing. • Standardize post-operative wound dressing, such as continuation of wound dressing for 24-48 hours and dressing removal on POD 2. • Instructions for cleansing agent use based on open or closed status of wound. • Provide patient and caregiver education on optimal post-discharge wound care.

SSI Prevention Basics
- Hand Hygiene (for staff, patient, and family)
- Environmental Cleanliness (maintaining aseptic environment in the OR)
- Basic Safe Surgery Bundle

* The only bundle element that is specific for colon surgery. All colon bundle elements can be used to reduce SSI in all surgeries.

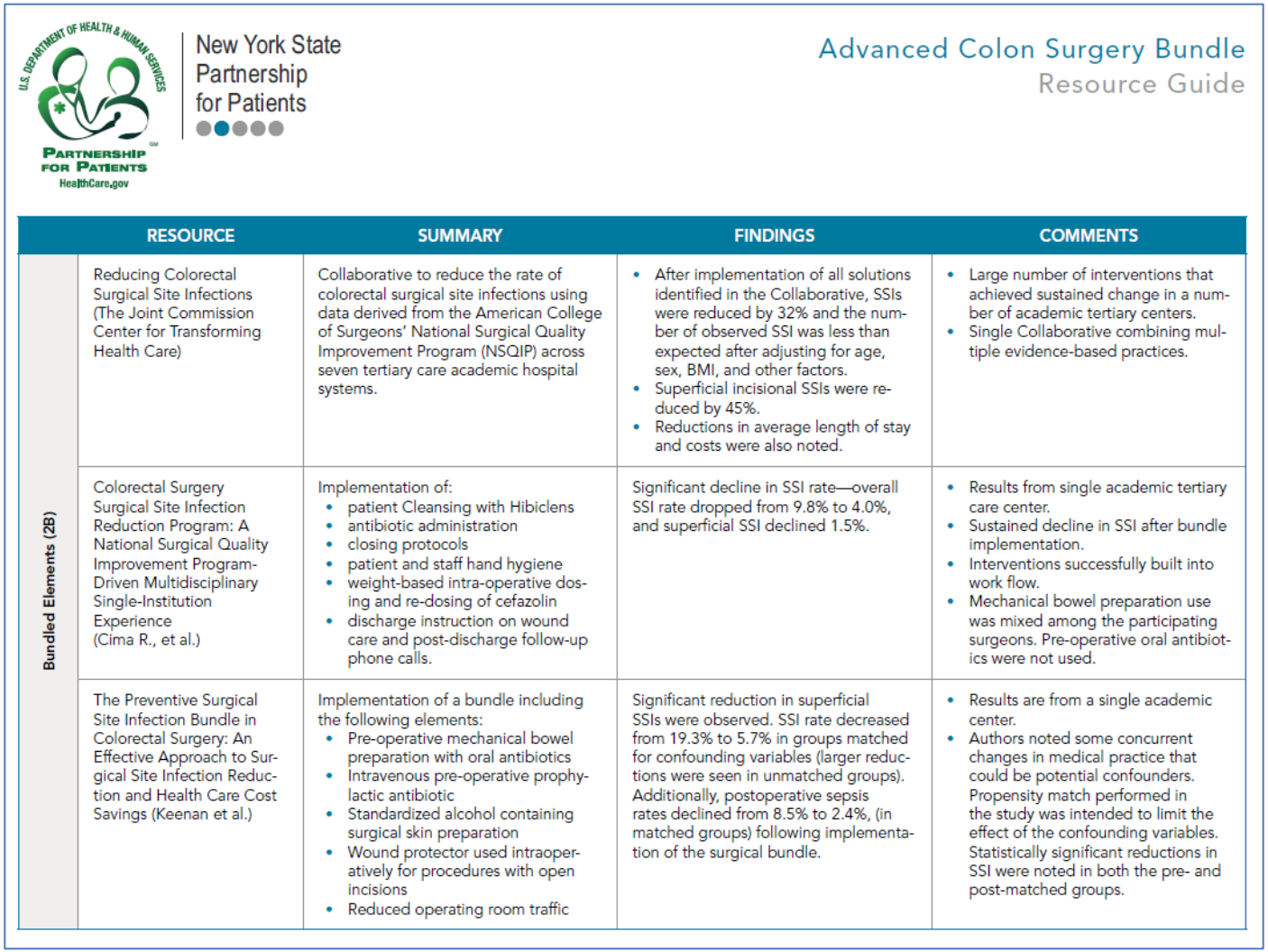
Advanced Colon Surgery Bundle Gap Analysis

New York State Partnership for Patients

Advanced Colon Surgery Bundle
Gap Analysis

ESSENTIAL BUNDLE ELEMENT	BUNDLE ELEMENT SPECIFICS		IS THE ELEMENT A ROUTINE PART OF PRACTICE AT MY HOSPITAL (YES/NO)	ACTION PLAN
Pre-operative Mechanical Bowel Preparation with Oral Antibiotics	Provide pre-operative mechanical bowel preparation for patients	• Physician office or Pre-admission testing (PAT)		
	Prescribe pre-operative oral antibiotics for patients to take following mechanical bowel preparation.	• Physician office or PAT		
	Provide patient and family education on: • How to use mechanical bowel preparation and take oral antibiotics pre-operatively • Why pre-operative bowel preparation and oral antibiotics is important to reduce risk of surgical site infection	• Physician office or PAT		
	Document whether the patient was able to complete pre-operative mechanical bowel preparation in combination with oral antibiotics or not.	• Pre-operative holding area		
Normothermia Maintain core temperature ≥ 36°C during the perioperative period.	Active patient warming (e.g., forced air warming device) in:	• Pre-operative holding area		
		• OR		
		• PACU		

Advanced Colon Surgery Bundle Resource Guide



New York State Partnership for Patients

Advanced Colon Surgery Bundle
Resource Guide

	RESOURCE	SUMMARY	FINDINGS	COMMENTS
Bundled Elements (2B)	Reducing Colorectal Surgical Site Infections (The Joint Commission Center for Transforming Health Care)	Collaborative to reduce the rate of colorectal surgical site infections using data derived from the American College of Surgeons' National Surgical Quality Improvement Program (NSQIP) across seven tertiary care academic hospital systems.	• After implementation of all solutions identified in the Collaborative, SSIs were reduced by 32% and the number of observed SSI was less than expected after adjusting for age, sex, BMI, and other factors. • Superficial incisional SSIs were reduced by 45%. • Reductions in average length of stay and costs were also noted.	• Large number of interventions that achieved sustained change in a number of academic tertiary centers. • Single Collaborative combining multiple evidence-based practices.
	Colorectal Surgery Surgical Site Infection Reduction Program: A National Surgical Quality Improvement Program-Driven Multidisciplinary Single-Institution Experience (Cima R., et al.)	Implementation of: • patient Cleansing with Hibiclens • antibiotic administration • closing protocols • patient and staff hand hygiene • weight-based intra-operative dosing and re-dosing of cefazolin • discharge instruction on wound care and post-discharge follow-up phone calls.	Significant decline in SSI rate—overall SSI rate dropped from 9.8% to 4.0%, and superficial SSI declined 1.5%.	• Results from single academic tertiary care center. • Sustained decline in SSI after bundle implementation. • Interventions successfully built into work flow. • Mechanical bowel preparation use was mixed among the participating surgeons. Pre-operative oral antibiotics were not used.
	The Preventive Surgical Site Infection Bundle in Colorectal Surgery: An Effective Approach to Surgical Site Infection Reduction and Health Care Cost Savings (Keenan et al.)	Implementation of a bundle including the following elements: • Pre-operative mechanical bowel preparation with oral antibiotics • Intravenous pre-operative prophylactic antibiotic • Standardized alcohol containing surgical skin preparation • Wound protector used intraoperatively for procedures with open incisions • Reduced operating room traffic	Significant reduction in superficial SSIs were observed. SSI rate decreased from 19.3% to 5.7% in groups matched for confounding variables (larger reductions were seen in unmatched groups). Additionally, postoperative sepsis rates declined from 8.5% to 2.4%, (in matched groups) following implementation of the surgical bundle.	• Results are from a single academic center. • Authors noted some concurrent changes in medical practice that could be potential confounders. Propensity match performed in the study was intended to limit the effect of the confounding variables. Statistically significant reductions in SSI were noted in both the pre- and post-matched groups.

Advanced Colon Surgery Bundle Companion Document

NYS PARTNERSHIP FOR PATIENTS

NO HARM ACROSS THE BOARD

ADVANCED COLORECTAL SURGERY BUNDLE COMPANION DOCUMENT

To be used as a companion document to the Advanced Colon Bundle Gap Analysis

ESSENTIAL BUNDLE ELEMENT	BUNDLE ELEMENT SPECIFICS (If not present at your hospital or answering no, please see next column for suggested next steps)	IF THE SPECIFIC BUNDLE ELEMENT IS MISSING, CONSIDER THE FOLLOWING STEPS:
Pre-operative Mechanical Bowel Preparation and Oral Antibiotics	Does your hospital provide pre-operative mechanical bowel preparation and prescribe/provide pre-operative oral antibiotics for patients in the physician office/pre-admission testing (PAT) ☐ Yes ☐ No	• Determine who will provide, as standard, patients with the prescription for or provide the mechanical bowel preparation and oral antibiotics for patients to take pre-operatively • Work with surgeons, office staff, or PAT staff to identify and overcome barriers to ensure that the prescription for or mechanical bowel preparation and antibiotic formulations are provided to the patient • Add provision of pre-operative mechanical bowel preparation and oral antibiotics to standardized workflow in preparing the patient for surgery. • Provide patient and caregiver education on how to properly use the mechanical bowel preparation and take the oral antibiotics prior to hospital admission for the procedure and why the bowel preparation and oral antibiotics are necessary • Build into workflow a pre-operative check with patient as to completeness of mechanical bowel prep in combination with oral antibiotics
Normothermia	Does your hospital have active patient warming (e.g., using forced air warming device, warm blankets, warmed IV fluids in OR) in the: ☐ Pre-operative Holding Area ☐ OR ☐ PACU	• Work with staff to identify and overcome barriers to active patient warming. • Determine what equipment and supplies are needed to provide active patient warming. • Add active patient warming to work flow and care protocols.
	Does your hospital have a mechanism to check and maintain patients' core temperature >36°C in the: ☐ OR ☐ PACU	• Determine frequency of temperature monitoring required. • Add temperature monitoring to standard order sets, including target temperature and frequency of monitoring. • Assign accountability and time frames for monitoring patient temperature. • Determine what equipment and supplies are needed to regularly monitor patient temperature.

OR Observation Tool

New York State Partnership for Patients

Observation Tool: Operating Room

Colon Surgery

Patient Data Entry

In the section below, please enter the current period being tracked. Then enter total number of patients receiving Colon Surgery in the specified period for which the bundle elements were tracked. Please only count patients that have visited all of the following sites: pre-operative, OR, and PACU.

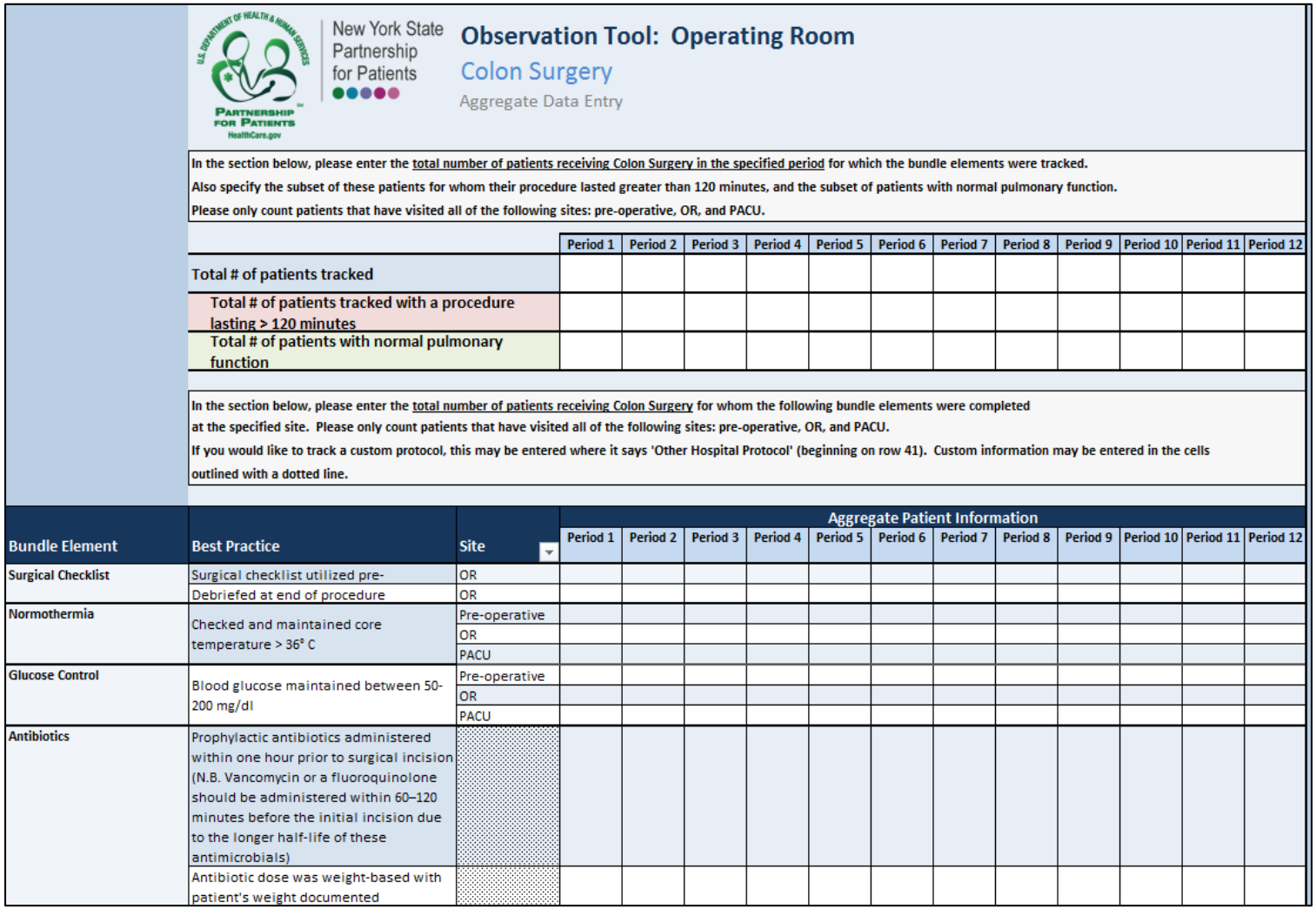
Period Tracked:

Total # of Patients Tracked:

In the section below, please enter an "x" for each patient receiving Colon Surgery for whom the following bundle elements were completed at the specified site. Please only count patients that have visited all of the following sites: pre-operative, OR, and PACU. If you would like to track a custom protocol, this may be entered where it says 'Other Hospital Protocol'. Custom information may be entered in the cells outlined with a dotted line.

Bundle Element	Best Practice	Site	Patient # 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total	%
Surgical Checklist	Surgical checklist utilized pre-operatively	OR																															0	
	Debriefed at end of procedure	OR																															0	
Normothermia	Checked and maintained core temperature > 36° C	Pre-operative																															0	
		OR																															0	
		PACU																															0	
Glucose Control	Blood glucose maintained between 50-200 mg/dl	Pre-operative																															0	
		OR																															0	
		PACU																															0	
Antibiotics	Prophylactic antibiotics administered within one hour prior to surgical incision (N.B. Vancomycin or a fluoroquinolone should be administered within 60–120 minutes before the initial incision due to the longer half-life of these antimicrobials)																															0	
	Antibiotic dose was weight-based with patient's weight documented																															0	
	Patient had a procedure lasting > 120 minutes																															0	

OR Observation Tool
Analytical Tool



New York State Partnership for Patients

Observation Tool: Operating Room

Colon Surgery

Aggregate Data Entry

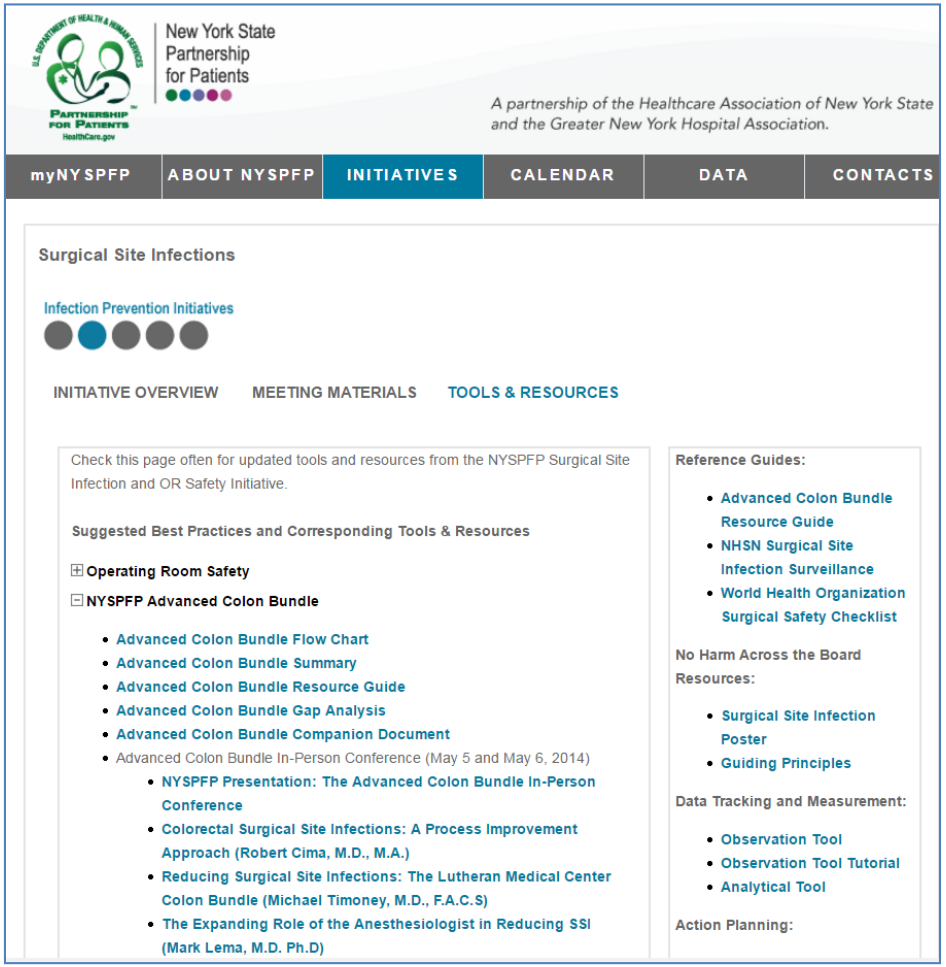
In the section below, please enter the total number of patients receiving Colon Surgery in the specified period for which the bundle elements were tracked.
Also specify the subset of these patients for whom their procedure lasted greater than 120 minutes, and the subset of patients with normal pulmonary function.
Please only count patients that have visited all of the following sites: pre-operative, OR, and PACU.

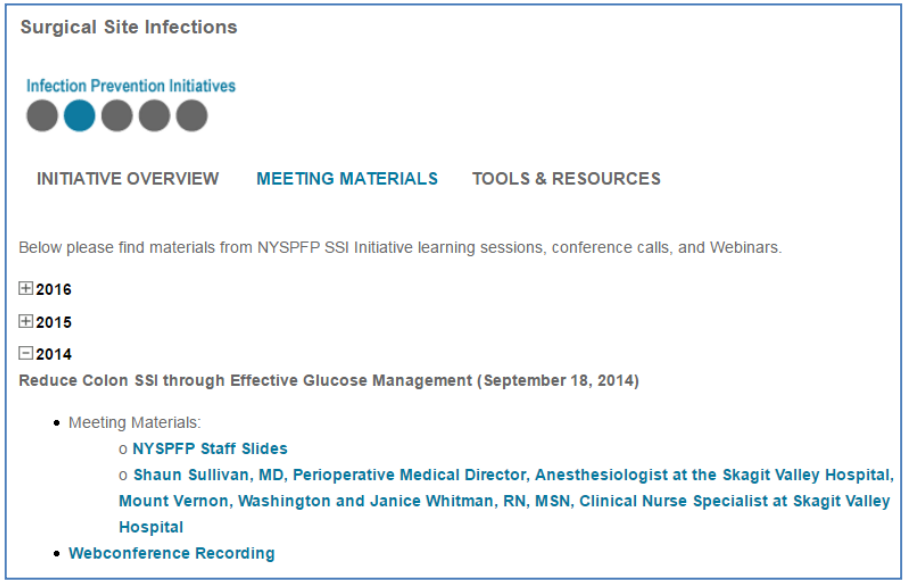
	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7	Period 8	Period 9	Period 10	Period 11	Period 12
Total # of patients tracked												
Total # of patients tracked with a procedure lasting > 120 minutes												
Total # of patients with normal pulmonary function												

In the section below, please enter the total number of patients receiving Colon Surgery for whom the following bundle elements were completed at the specified site. Please only count patients that have visited all of the following sites: pre-operative, OR, and PACU.
If you would like to track a custom protocol, this may be entered where it says 'Other Hospital Protocol' (beginning on row 41). Custom information may be entered in the cells outlined with a dotted line.

Bundle Element	Best Practice	Site	Aggregate Patient Information											
			Period 1	Period 2	Period 3	Period 4	Period 5	Period 6	Period 7	Period 8	Period 9	Period 10	Period 11	Period 12
Surgical Checklist	Surgical checklist utilized pre-	OR												
	Debriefed at end of procedure	OR												
Normothermia	Checked and maintained core temperature > 36° C	Pre-operative												
		OR												
		PACU												
Glucose Control	Blood glucose maintained between 50-200 mg/dl	Pre-operative												
		OR												
		PACU												
Antibiotics	Prophylactic antibiotics administered within one hour prior to surgical incision (N.B. Vancomycin or a fluoroquinolone should be administered within 60–120 minutes before the initial incision due to the longer half-life of these antimicrobials)													
	Antibiotic dose was weight-based with patient's weight documented													

Tools and Resources on NYSPFP Website





Going Beyond the Bundle to ERAS

What is enhanced recovery after surgery (ERAS)?

- Surgical intervention leads to endocrine and metabolic stress reactions that can slow recovery.
- ERAS is a program incorporating multimodal, multidisciplinary interventions in the perioperative period to expedite recovery.
- Common modalities in ERAS can include (but are not limited to) the following:
  - Early removal of drains
  - Optimized pain management
  - Early enteral nutrition
  - Preoperative optimization of a patient's nutritional status and other organ function
  - Patient education
  - Goal-directed fluid therapy
  - Early ambulation

Going Beyond the Bundle to ERAS

(Cont.)

Why consider implementing ERAS?

- Studies have shown that ERAS can:
  - Reduce morbidity
    - Reductions in SSI, ileus, and other associated complications have been reported.
      - » A recent meta-analysis reported that programs with high compliance ERAS elements can achieve up to a 50% reduction in complications.
  - Reduce reoperations
  - Result in patient's faster return to normal function
  - Reduce length of stay and readmissions
  - Lead to better quality of life outcomes in the medium and long term
  - Reduce costs

NYSPFP and ERAS Webinars

Enhanced Recovery After Surgery in Combination with the Advanced Colon Bundle

Speaker: Christopher Mantyh, MD, FACS/FASCRS, Duke University Medical Center.

Tools provided by speaker:

- Duke Health ERAS patient information leaflet
- Duke Health ERAS protocol
- FAQ for NYSPFP

ERAS Combined with the Advanced Colon Bundle

Speakers: Surgical team from St Jude's Medical Center, Fullerton CA.

Tools provided by speakers:

- Bundle audit tool
- ERAS/bundle checklists

Tools to Support Hospital Efforts to Reduce SSI

ERAS

- American Society for Enhanced Recovery
  - Sample protocols http://aserhq.org/protocols/
- ERAS Society Guidelines
  - http://erassociety.org/guidelines/list-of-guidelines/
- American Association of Nurse Anesthetists
  - https://www.aana.com/docs/default-source/practice-aana-com-web-documents-(all)/enhanced-recovery-after-surgery.pdf?sfvrsn=6d184ab1_6

NYSPFP Advanced Colon Bundle

- **NYSPFP Tools**
  - Flowchart
  - Resource guide
  - Gap analysis
    - Companion document
  - Summary document
  - Data collection and analytical tools

All of the above are available at www.nyspfp.org.

Contact Information

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NYC Health + Hospitals/Metropolitan

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Director, Infection Prevention and Control Program

Blesilda Zapanta, RN, BSN, MS, CNOR
Assistant Director Nursing, Peri-Operative Services

Reducing Colon SSI: Implementation of the Advanced Colon Surgery Bundle

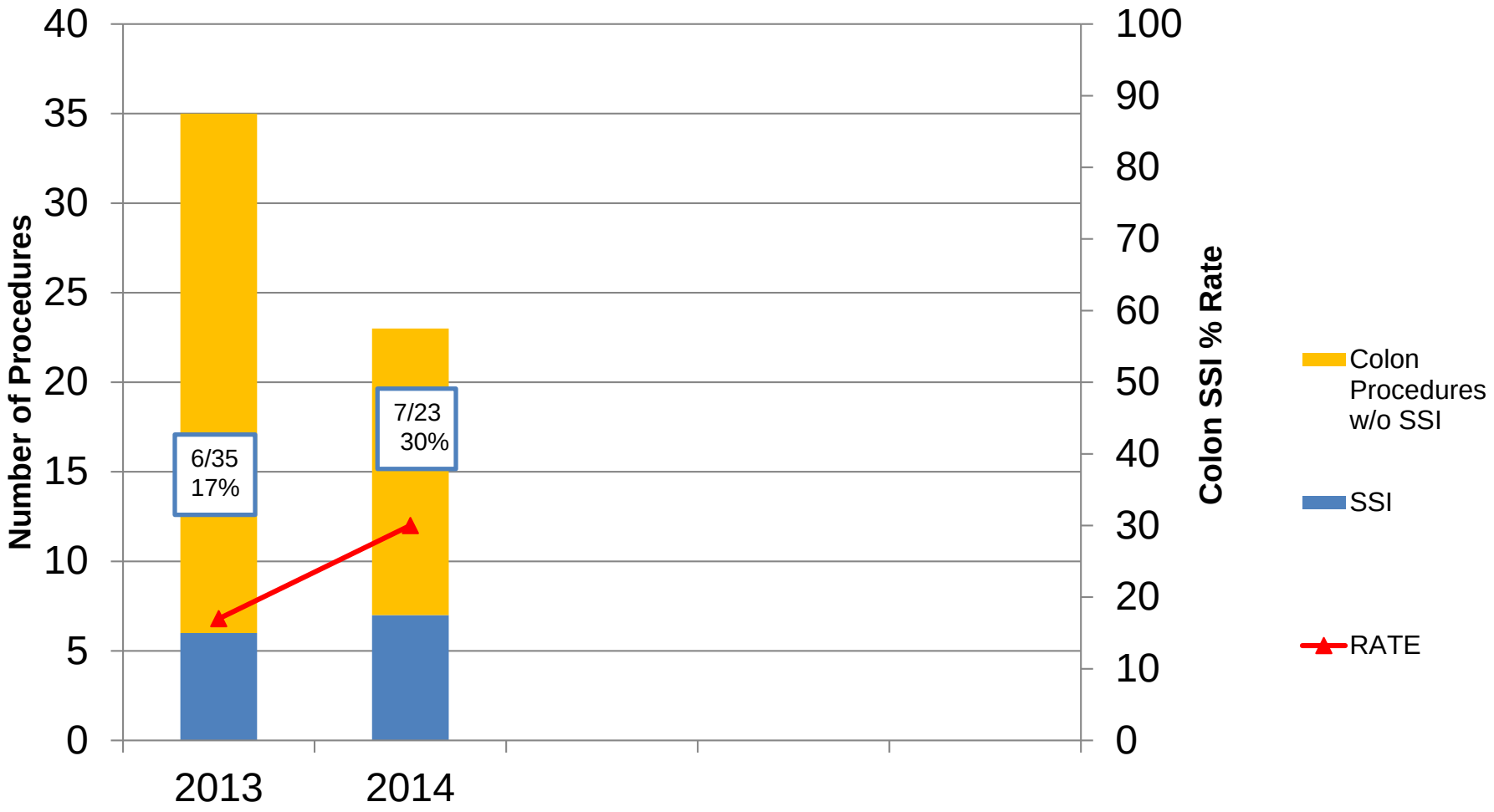
Our Team

Service/Department
Surgery
Anesthesia
Peri-Operative/PACU
Preadmission Testing/Ambulatory Surgery (Amb Surg)
Surgery Clinic
Pharmacy
Materials Management
Infection Control
Central Sterile Supply

Hospital Demographics

- NYC H+H/Metropolitan
  - 317-bed acute care hospital
  - 60,000 ED visits per year
  - 1,088 inpatient surgeries
  - 5,403 outpatient surgeries
- Patient population
  - Diverse ethnic background
  - East Harlem and Upper Yorkville

Pre-Bundle Colon Surgery SSI Rate



Reasons for Action

- Recognition that our colon surgery SSI rate was higher than the state average
- Partnership with NYSPFP
- Look at systems across the continuum of care
- Tracer methodology to identify opportunities for improvement
- PDSA cycles

Education

- Grand rounds
- Multidisciplinary
  - Surgery
  - Anesthesia
  - Nursing
  - Infection control
  - Administration

Advanced Colon Bundle Elements

Element	Actions
Preoperative Skin Preparation	• Patient education on preoperative skin prep (pre-op clinic and PAT), using a standardized patient instruction form • Chlorhexidine 2% skin wipes applied the night before (at home) and the morning before procedure (Amb Surg)
Normothermia Maintain core temperature greater than or equal to 36° C (96.8° F) during the perioperative period	• Bair Hugger® and blanket warmers • Starts at Amb Surg where patient gets connected to the Bair Hugger®, maintained intraoperatively by Anesthesia and followed through at PACU, where temperature is checked upon intake and every 30 minutes until discharged from PACU • Warmed IV fluids
Antimicrobial Prophylaxis Maintain therapeutic levels of the prophylactic antimicrobial agent in serum and tissues throughout the operation, using weight-based dosing and redosing as appropriate	• Pharmacy updated the antimicrobial protocol to reflect recommendations • Printed, laminated protocol placed in all anesthesia boxes • OR nurse checks for antibiotic prophylaxis start within one hour of incision
Glucose Control Maintain blood glucose level less than 200 mg/dl on the day of surgery and through the postoperative period	• Glucose management instituted pre-op in Amb Surg and post-op in PACU • Referral to Anesthesia for glucose management if above parameter
Operative Skin Preparation Use an antiseptic agent with alcohol for skin preparation unless contraindicated	• Standardized skin preparation in the OR using DuraPrep® (iodine antiseptic plus alcohol)
Standardized Fascia Closure Change gown, gloves, and surgical instruments for abdominal wound closure	• Separate tray for closure • Colon cases have a separate closure instrument tray and whole surgical team within the sterile field; change gown and gloves before closure. • A laparotomy pack drape is used over the operative field
Patient Education	• Standardized patient and caregiver education on optimal post-discharge wound care

Implementation

Bundle Compliance

Preadmission Testing

- Skin prep wipes
- Patient education

ADVANCED COLON BUNDLE MONITORING TOOL

MR#:_____

Patient's Name:

_____

Date of Procedure: _____

PRE-ADMISSION TESTING

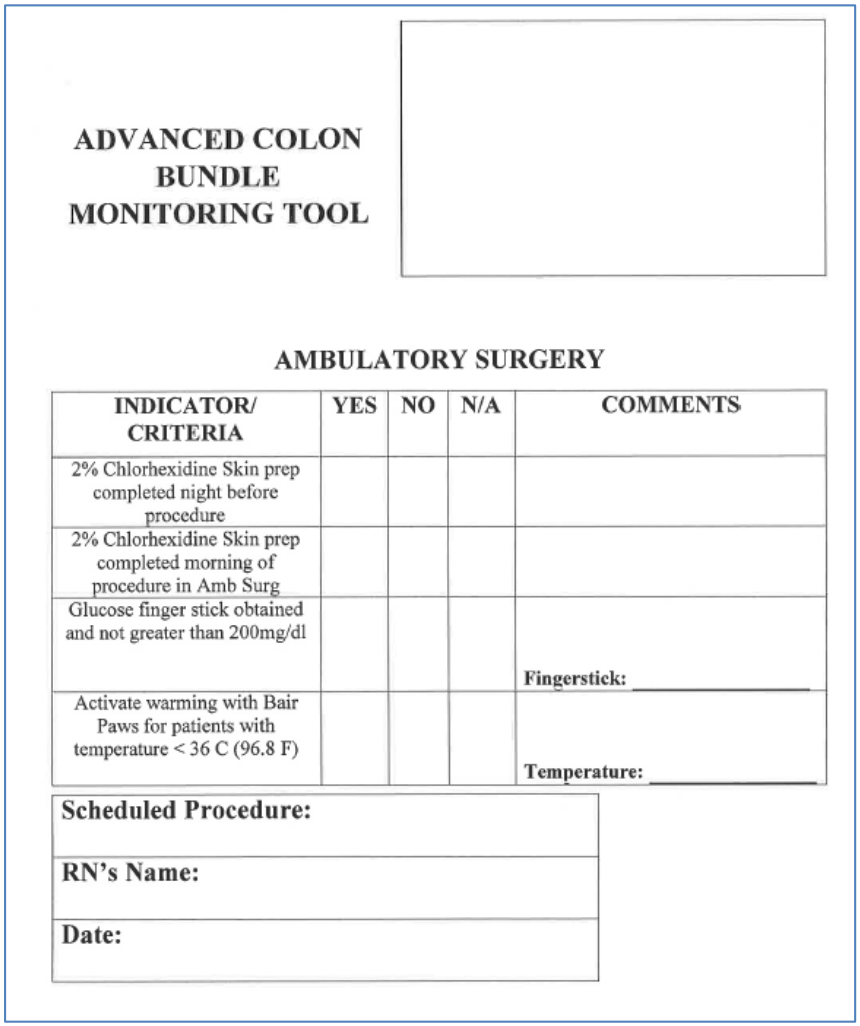
INDICATOR/ CRITERIA	YES	NO	N/A	COMMENTS
2% Chlorhexidine skin prep distributed to patient during PAT visit				
Patient educated/ able to articulate and demonstrate use of 2% Chlorhexidine skin prep				
Post op wound management handout given to patient.				
Patient educated on post-op wound management and able to articulate post-op wound management care				

Scheduled Procedure:
RN's Name:
Date:

Bundle Compliance

Ambsurg

- Pre-op skin prep
  - Evening prior
  - Day of surgery
- Blood glucose
  - Morning of surgery
- Body temperature
  - Active warming
    - Bair Paws® gown



ADVANCED COLON BUNDLE MONITORING TOOL

AMBULATORY SURGERY

INDICATOR/ CRITERIA	YES	NO	N/A	COMMENTS
2% Chlorhexidine Skin prep completed night before procedure				
2% Chlorhexidine Skin prep completed morning of procedure in Amb Surg				
Glucose finger stick obtained and not greater than 200mg/dl				**Fingerstick:** _____
Activate warming with Bair Paws for patients with temperature < 36 C (96.8 F)				**Temperature:** _____

Scheduled Procedure:
RN's Name:
Date:

Bundle Compliance

Operating Room

- Normothermia
  - Active warming
- Pre-op blood glucose
- Skin prep
  - Duraprep®
- Antibiotic
  - Timing prior to incision
- Wound closure
  - Use of closure tray
  - Team changing gown and gloves
  - Redraping field

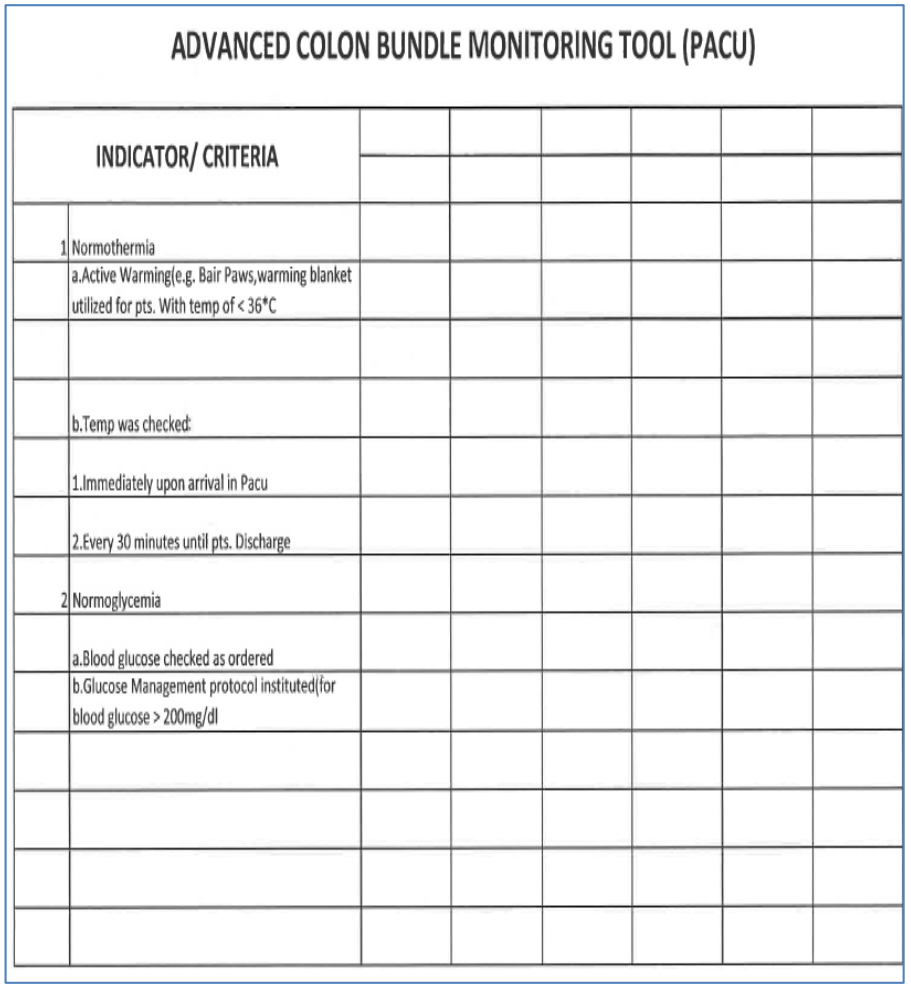
ADVANCE COLON BUNDLE MONITORING TOOL (OR)

	INDICATOR/ CRITERIA	YES	NO
1	**Normothermia**		
	a. Active warming (e.g. Bair Paws, warming blanket utilized for pts. With temp of < 36).		
2	**Pre-op blood glucose done**		
3	**Skin Preparation**		
	a. Dura prep used.		
4	**Antimicrobial Prophylaxis**		
	a. Standardized prophylactic antibiotic administered 1 hour prior to surgical incision.		
5	**Standardized Fascia Closure**		
	a. Separate instruments set up for fascia closure. (closure tray)		
	b. Surgical team changed gown and gloves.		
	c. Laparotomy pack drape used over the operative field.		
	Pt. Initial:		
	MR #		
	Procedure Done:		
	RN's Name:		
	Date:		

Bundle Compliance

PACU Tool

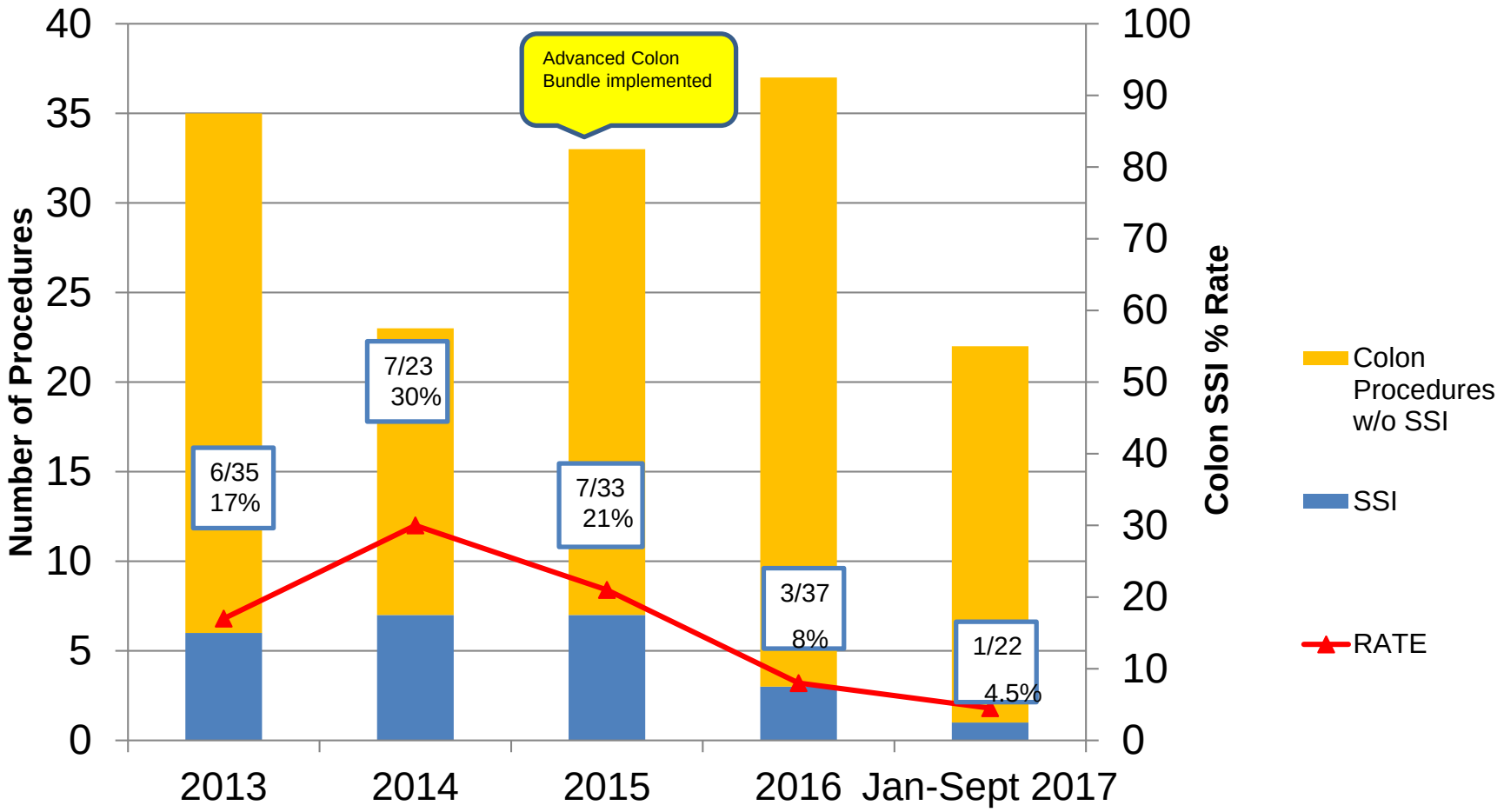
- Normothermia
  - Active warming
  - Temperature on arrival
  - Temperature every 30 minutes until discharge from PACU
- Normoglycemia
  - Blood glucose
  - Glucose management protocol for glucose greater than 200 mg/dl



ADVANCED COLON BUNDLE MONITORING TOOL (PACU)

	INDICATOR/ CRITERIA						
1	Normothermia						
	a.Active Warming(e.g. Bair Paws,warming blanket utilized for pts. With temp of < 36*C						
	b.Temp was checked:						
	1.Immediately upon arrival in Pacu						
	2.Every 30 minutes until pts. Discharge						
2	Normoglycemia						
	a.Blood glucose checked as ordered						
	b.Glucose Management protocol instituted(for blood glucose > 200mg/dl						

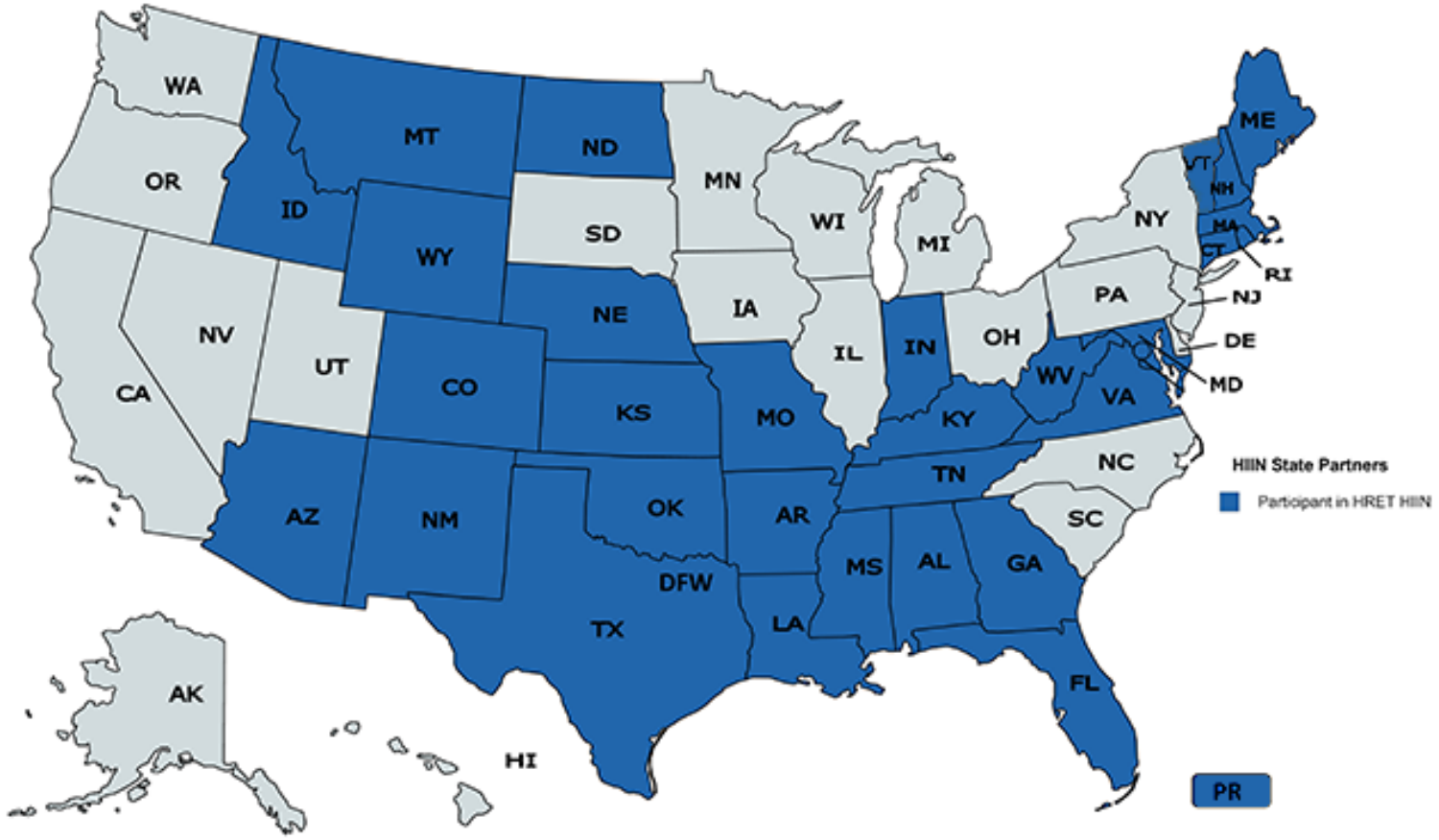
Post-Bundle SSI Rates



Mariana I. Albert Lesher, MS
Director, Data, Health Research & Educational Trust
American Hospital Association

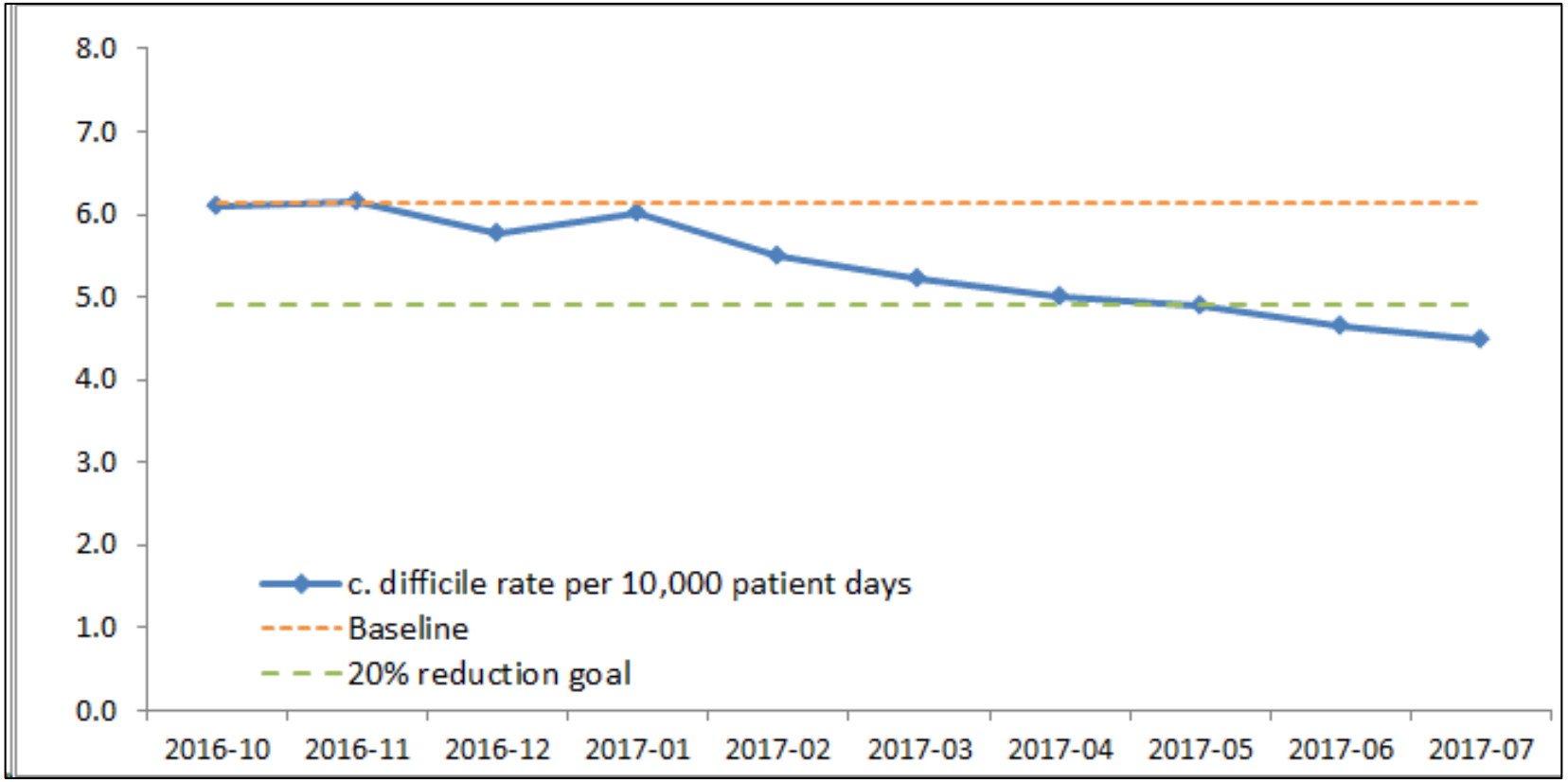
HRET HIIN

HRET HIIN



1,634 Hospitals

HRET HIIN – *C. difficile* Rate



Data as of October 2, 2017
n~1,400 hospitals reporting

Erik St. Pierre, MD
Emergency Department Director
Northern Maine Medical Center

Getting on Track with Antibiotic Stewardship

Northern Maine Medical Center

- A 49-bed rural acute care hospital
- Services
  - ED
  - ICU
  - Long-term care/skilled/rehab
  - Obstetrics
  - On-site lab and radiology
  - Pharmacy
  - Psychiatry
  - Surgery

Reduction of Hospital-Acquired Infections (*C. difficile*)

- Northern Maine Medical Center has taken a very aggressive approach to reduce rates of hospital-acquired infections.
- These include:
  - Development of an antibiotic stewardship program
  - Staff education on the prevention of hospital-acquired infections
  - Aggressive handwashing and monitoring program
  - Collaboration with Environmental Services Director to improve and standardize practices

Antibiotic Stewardship Program

- September 2015, Dustin Butler (pharmacist) presented a grand rounds on antibiotic stewardship (motivation)
- Formed a team/committee
  - Erik St. Pierre, MD (ER physician) and Dustin Butler (pharmacist), co-chairs
  - Physicians (ER, surgeon, hospitalist, outpatient)
  - Administration, nursing, infection control, lab, computer systems, quality improvement, housekeeping, public relations
- Reviewed articles and best practices to educate the team/committee
- Provided educational sessions and media for the staff and the community
- Training for the pharmacist as an antibiotic/ID specialist

Getting the Work Done

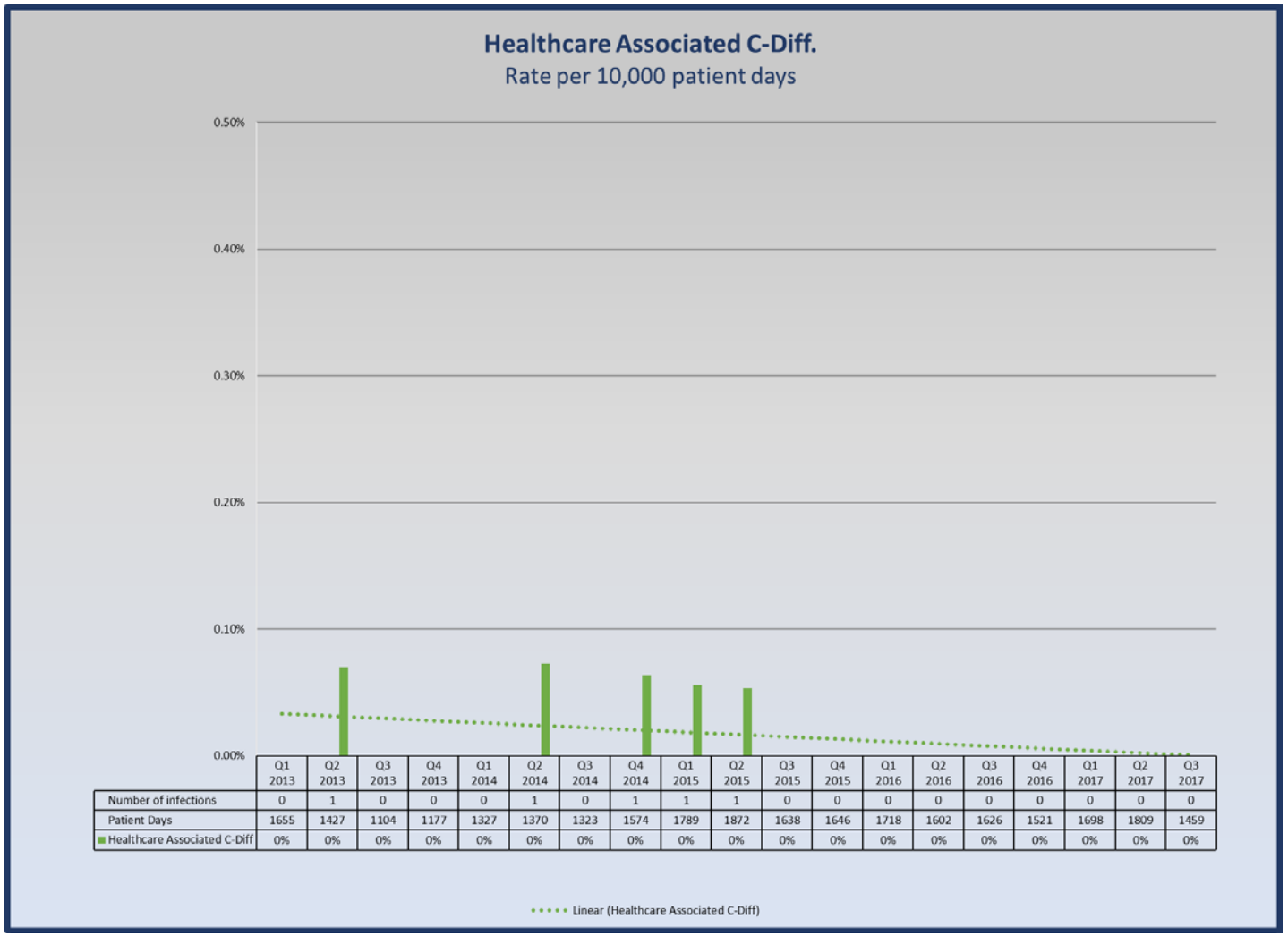
Antibiotic Stewardship Program Committee

- Met monthly
- Set goals, objectives, and timelines
- Determined the hospital's most common infections (outpatient, hospital, and surgical)
    - Bronchitis, COPD, cellulitis, otitis, pharyngitis, pneumonia, sinusitis, UTI
    - COPD, cellulitis, pneumonia, sepsis
    - Appendicitis, cholecystitis, diverticulitis
- Developed evidence-based algorithms and protocols individualized to the community, based on antibiogram
- Integrated the antibiotic stewardship program into hospital intranet and hospital EMR
- Incorporated local long-term care facilities into the program

Measures – What and How

- Compliance
  - Are the providers following the algorithms? (one at a time)
  - Are the hospitalists documenting into the hospital record?
    - ATB used, the dose, timing, duration, review cultures, deviation from protocol, document the antibiotic time out
- Outcomes
  - Resistance rates
  - Opportunistic infections (*C. difficile*, MRSA)
  - Costs and overall antibiotic use
- Quality department and computer systems are responsible for gathering data, abstracting, and reporting back to the committee.
- Results are showing improved compliance, decreased resistance to antibiotics, decreased incidence of hospital-acquired infections, and cost savings.

Healthcare-Associated CDI Rate



	Q1 2013	Q2 2013	Q3 2013	Q4 2013	Q1 2014	Q2 2014	Q3 2014	Q4 2014	Q1 2015	Q2 2015	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Q3 2016	Q4 2016	Q1 2017	Q2 2017	Q3 2017
Number of infections	0	1	0	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0
Patient Days	1655	1427	1104	1177	1327	1370	1323	1574	1789	1872	1638	1646	1718	1602	1626	1521	1698	1809	1459
Healthcare Associated C-Diff	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Barriers and How They Were Resolved

- Most small and critical access hospitals do not have monetary resources to fund an antibiotic stewardship program. Importance of delegation and making this part of existing job responsibilities.
- Gathering data can be time consuming and challenging.
- Need to get buy-in from **all** providers on the importance of antibiotic stewardship.
- Community and patient education must be a part of the program.
- Most small hospitals will not be able to find an infectious disease specialist as a resource. Utilize existing physicians and pharmacists as experts. Only use the ID specialist sparingly.

Advice for Others

- Avoid making only one person responsible for the program (use co-chairs for the committee), preferably a physician and a pharmacist
- Choose team wisely (motivated and responsible)
- Set achievable goals and timelines
- Meet regularly and delegate
- Achieve **buy in** from **all**: administration, physicians, and providers
- Educate not only the physicians/providers, but also the rest of the hospital staff, patients, and community
- Collaborate with other hospitals/networks to share ideas, algorithms, data, specialists, etc.

Staff Education on Reducing Hospital-Acquired Infections

- Handwashing education and monitoring activities are always linked back to the prevention of hospital-acquired infections to connect the dots.
- Monthly feedback on monitoring activities provides regular opportunity to connect back to prevention of infection.
- Environmental services staff education and feedback to compliance with checklists to connect back to prevention of infection.

Handwashing Education and Monitoring

- Assessing all hand hygiene/sanitizer locations on a periodic basis for utility/barriers/need to add
- Staff interview/discussion at the same time regarding barriers to hand hygiene
- Monthly secret shopper observations
- Observations collected to include staff names, department, and compliance with gel in and gel out
- Staff and their department supervisor are provided monthly feedback with full transparency of staff names
- Organization-wide monthly feedback by department on compliance
- Monthly tracer activity by the Quality and Infection Prevention Department includes staff interview/discussion/observation of hand hygiene

Collaboration with Environmental Services

- Evaluated best practices for routine and terminal cleaning of rooms
- Initiated cleaning standardized checklists for EVS staff
- Incorporated dedicated bathroom caddies and toilet brushes
- Switched to microfiber floor mops across the institution
- Used disposable cloths for wiping surfaces
- Revisited and hard-wired the weekly, monthly, quarterly, biannual, and annual cleaning checklists
- Incorporated environmental services supervisor daily rounding to ensure new processes implemented

Next Steps

- Embarking on a high-reliability journey
- Reporting and transparency of a total harm rate, which would include any HAI or complication
- Continue developing involvement with long-term care facilities.

Questions

Continuing Education Approval

This program has been approved for 1.5 continuing education (CE) units for the following professional boards:

- Florida Board of Clinical Social Work, Marriage & Family Therapy and Mental Health Counseling
- Florida Board of Nursing Home Administrators
- Florida Council of Dietetics
- Florida Board of Pharmacy
- Board of Registered Nursing (Provider #16578)
  - It is your responsibility to submit this form to your accrediting body for credit.

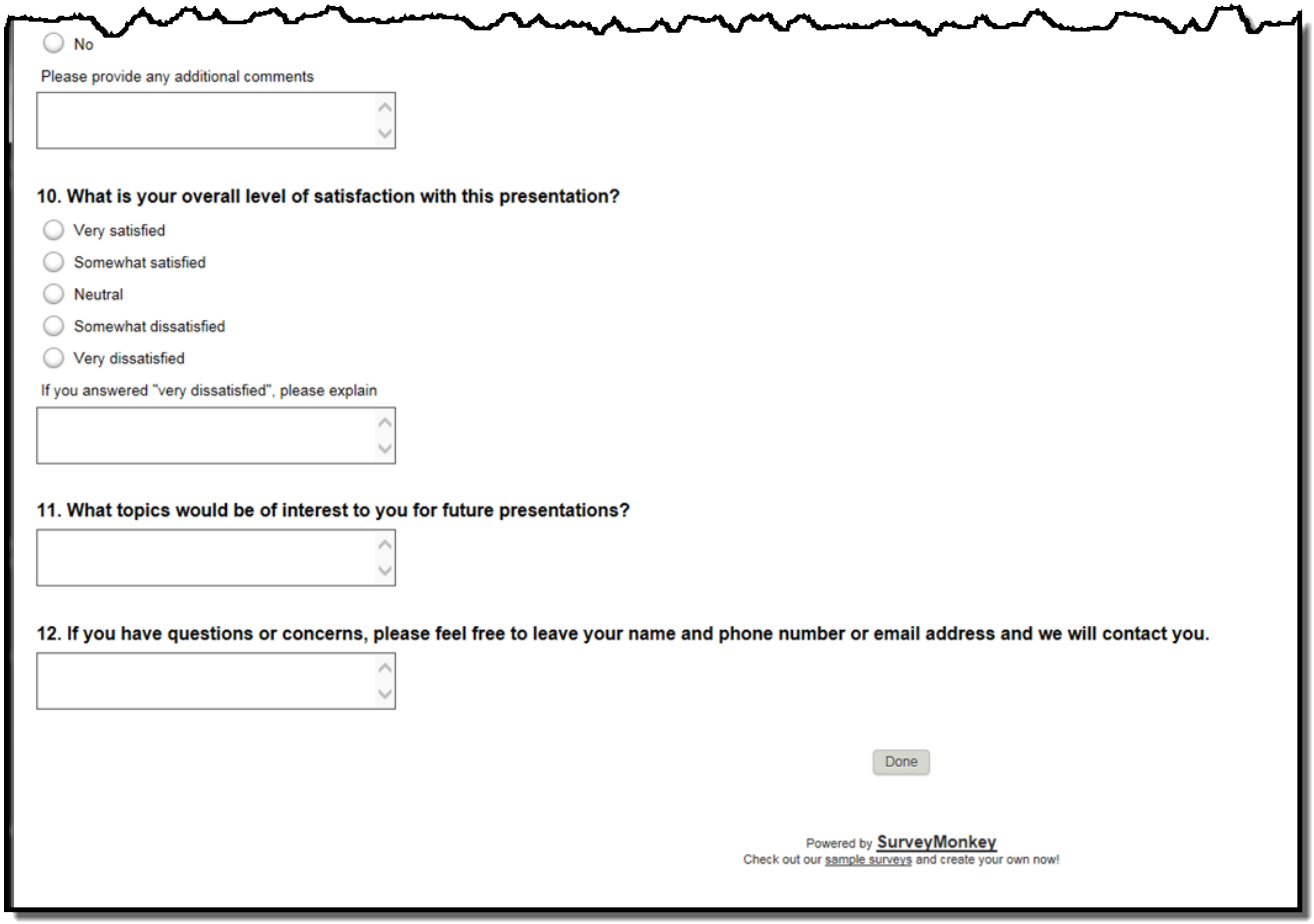
CE Credit Process

- Complete the ReadyTalk® survey that will pop up after the webinar, or wait for the survey that will be sent to all registrants within the next 48 hours.
- After completion of the survey, click “Done” at the bottom of the screen.
- Another page will open that asks you to register in the HSAG Learning Management Center.
  - This is a separate registration from ReadyTalk®.
  - Please use your **personal** email so you can receive your certificate.
  - Healthcare facilities have firewalls up that block our certificates.

CE Certificate Problems

- If you do not **immediately** receive a response to the email that you signed up with in the Learning Management Center, you have a firewall up that is blocking the link that was sent.
- Please go back to the **New User** link and register your personal email account.
  - Personal emails do not have firewalls.

CE Credit Process: Survey



No

Please provide any additional comments

10. What is your overall level of satisfaction with this presentation?

- Very satisfied
- Somewhat satisfied
- Neutral
- Somewhat dissatisfied
- Very dissatisfied

If you answered "very dissatisfied", please explain

11. What topics would be of interest to you for future presentations?

12. If you have questions or concerns, please feel free to leave your name and phone number or email address and we will contact you.

Done

Powered by SurveyMonkey
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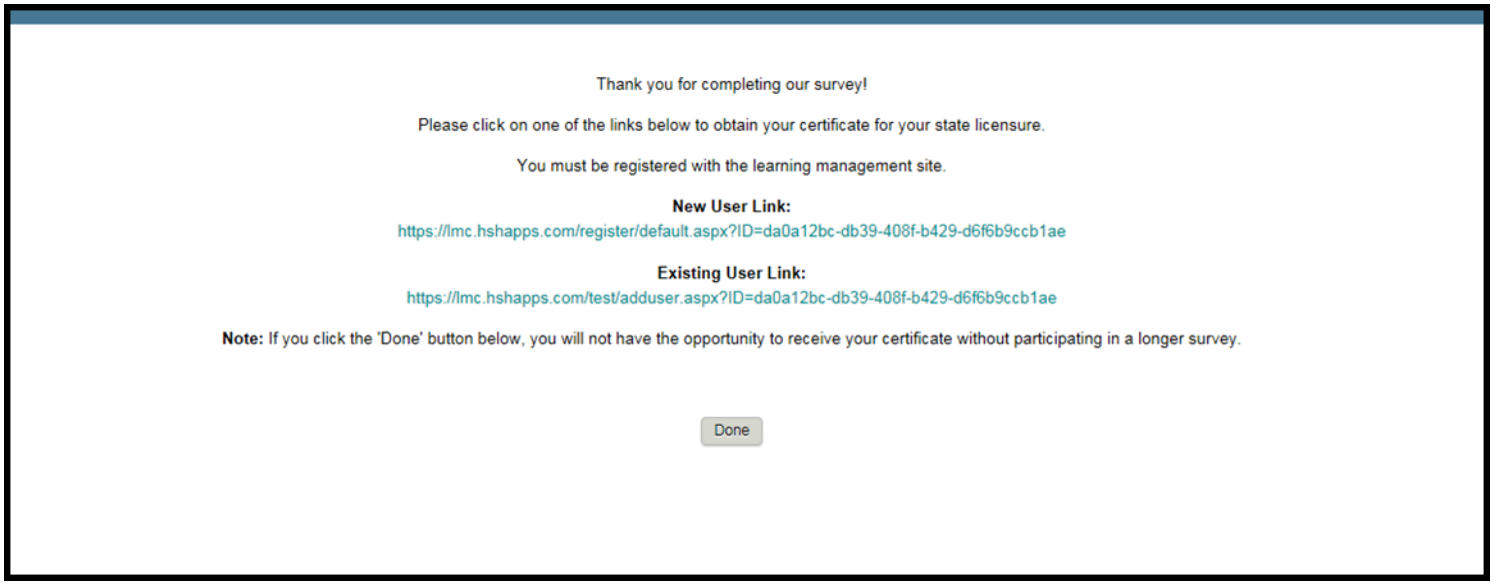
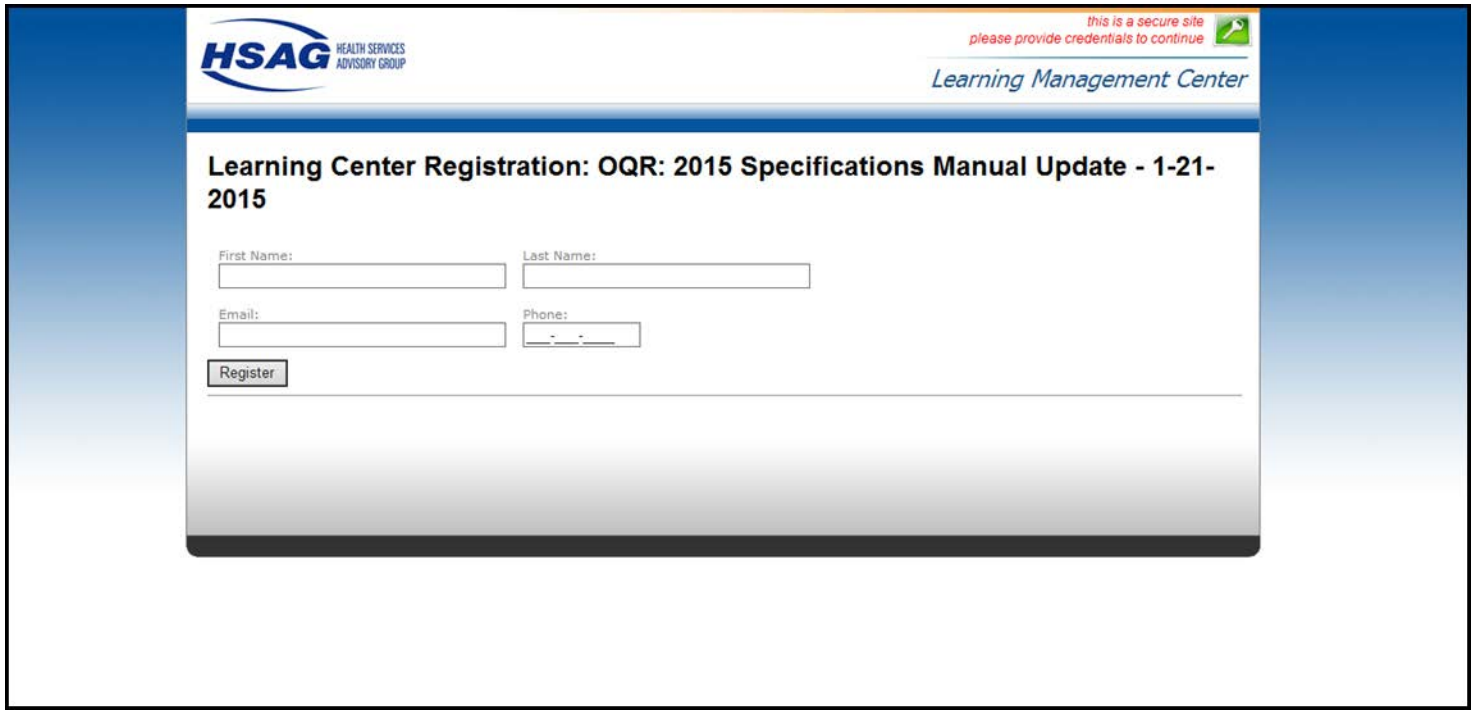
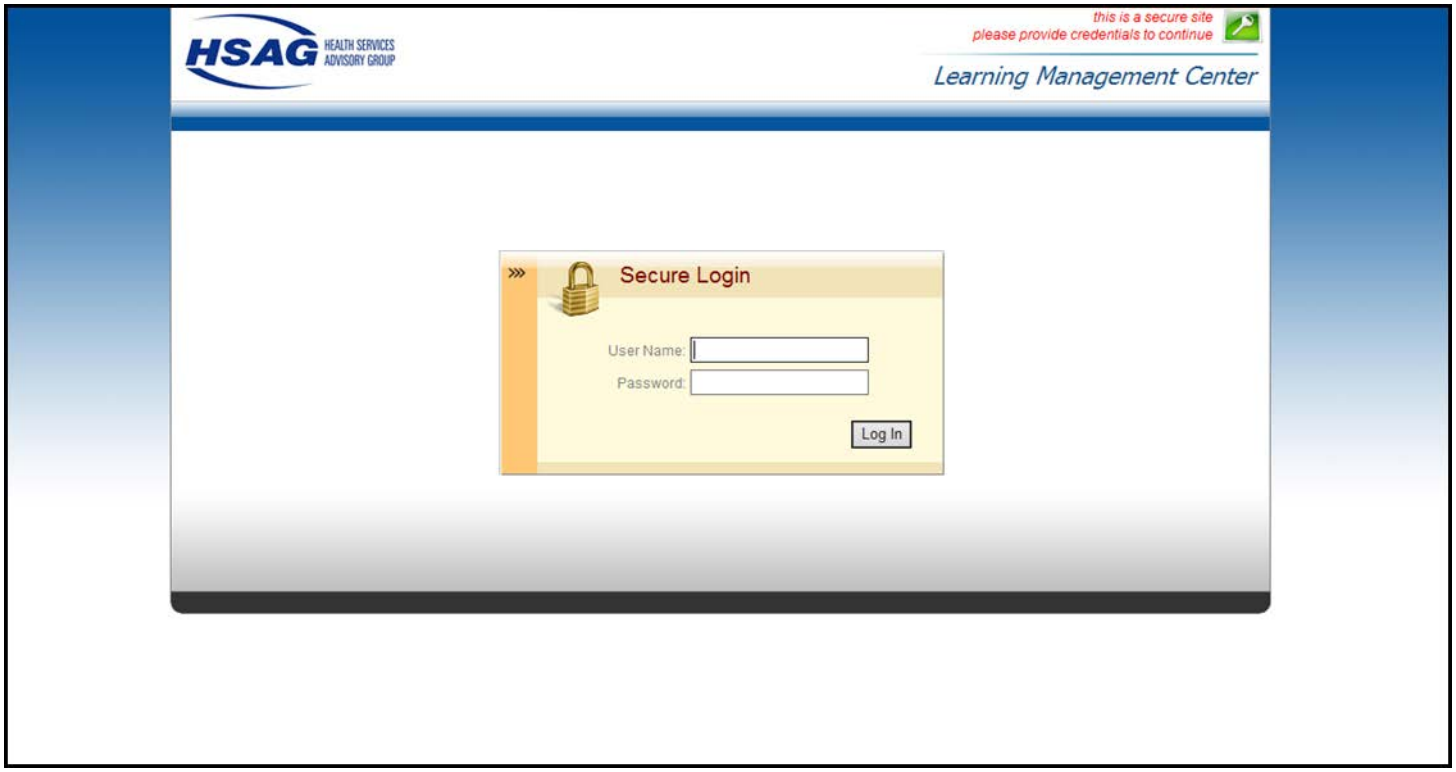
CE Credit Process: Certificate



CE Credit Process: New User



CE Credit Process: Existing User



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