



New York State
Partnership
for Patients



Implementing the American College of Surgeons' Strong for Surgery Bundle

June 15, 2018

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



Agenda

Topic	Speaker
Welcome and Introductions	NYSPFP Staff
SSI Rates in New York	NYSPFP Staff
A Hospital-Based Preoperative Clinic Implementation of Enhanced Recovery After Surgery & Strong For Surgery	CHRISTUS St. Michael Health System, Texas
Hospital Questions and Discussion	Hospital Participants Facilitated by NYSPFP Staff
Next Steps	NYSPFP Staff



Why Focus on Surgical Site Infections?

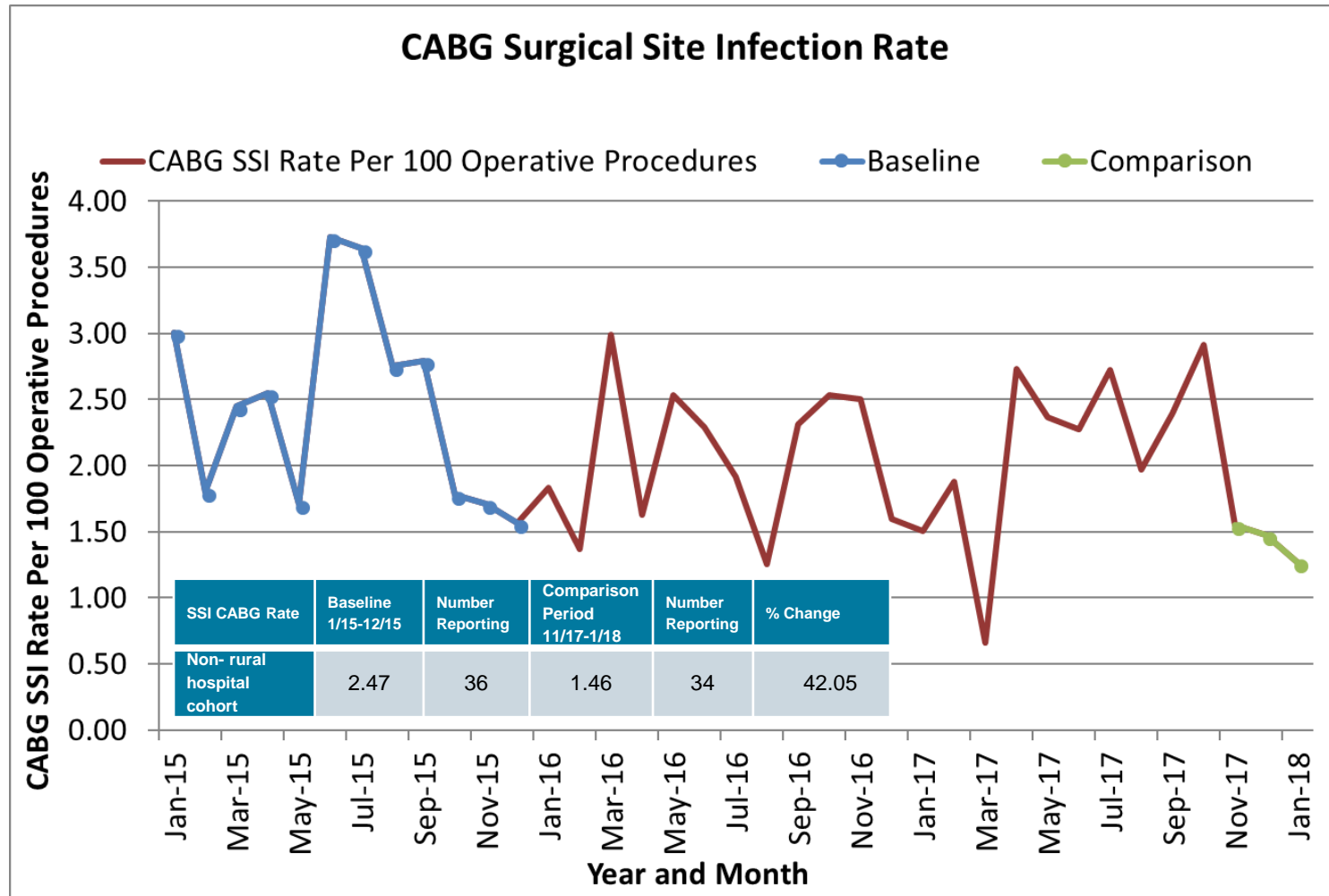
- 2.6% of 30 million operations per year are complicated by SSI (800,000 – 2 million SSI annually)
- SSI accounts for 38% of HAI in surgical patients
- SSIs are associated with:
 - Increased length of stay
 - Increased hospital costs (estimated increase of \$1,300 – \$5,000 per case)
 - Increased patient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

References:

1. Boyce JM, Potter-Bynoe G, Dziobek L. Infect Control Hosp Epidemiol. 1990; 11(2):89-93
2. Poulson KB, Bremmelgaard A, Sorensen AI, Raahave D, Petersen JV. Epidemiol Infect. 1994; 113(2): 283-295
3. Martone WJ, Jarvis, WR, Culver DH, Haley RW, Bennet JV, Brachman PS, eds. Hospital Infections. 3rd ed. Little, Brown & Co. 1992:577-596
4. Vegas, AA, Jodra VM, Garcia ML. Eur J Epidemiol. 1993;9(5):504-510
5. Murray BW, Huerta S, Dineen S, Anthony T. J Am Coll Surg 2010;211(6):812-822

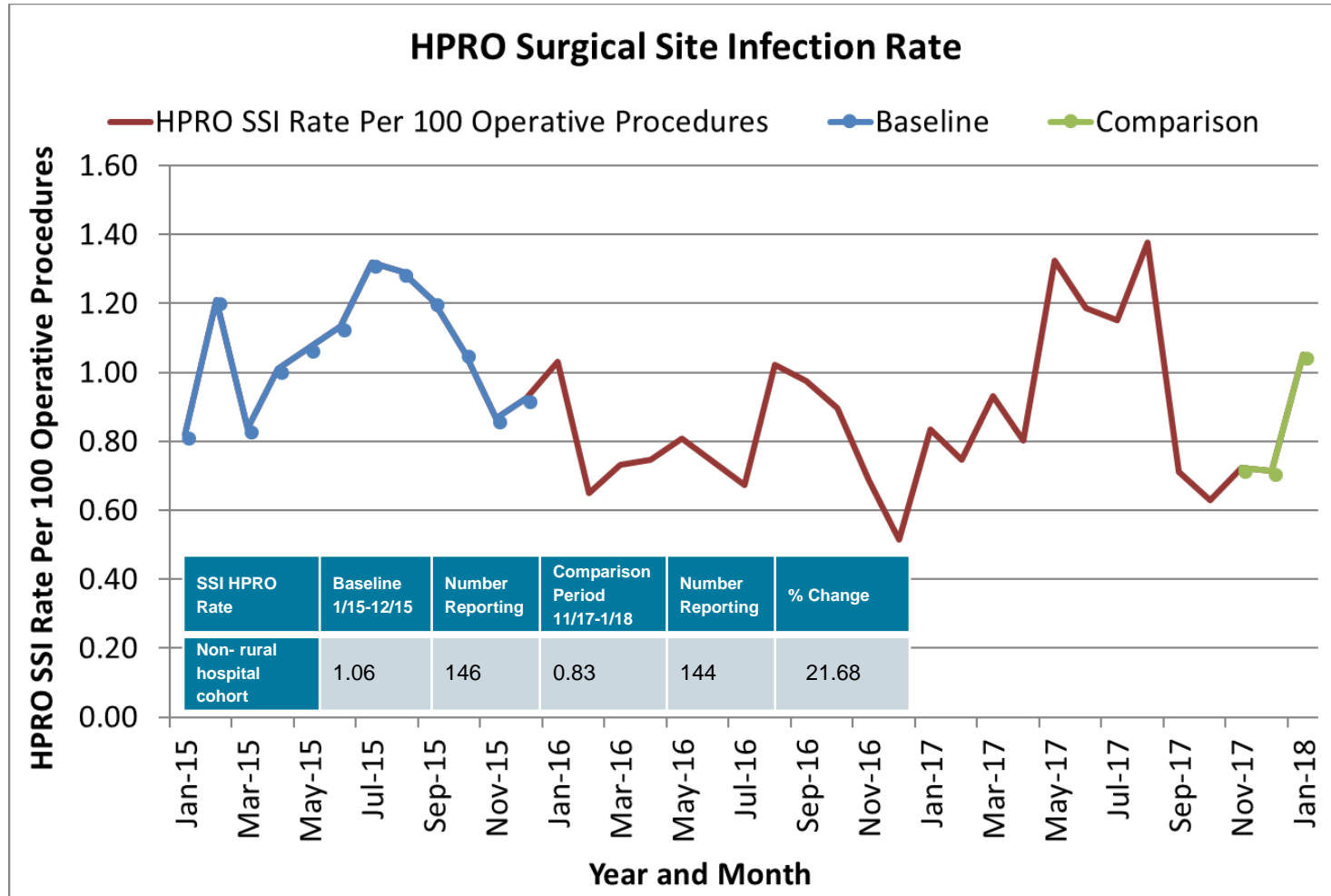


NYSPFP SSI Rate: CABG



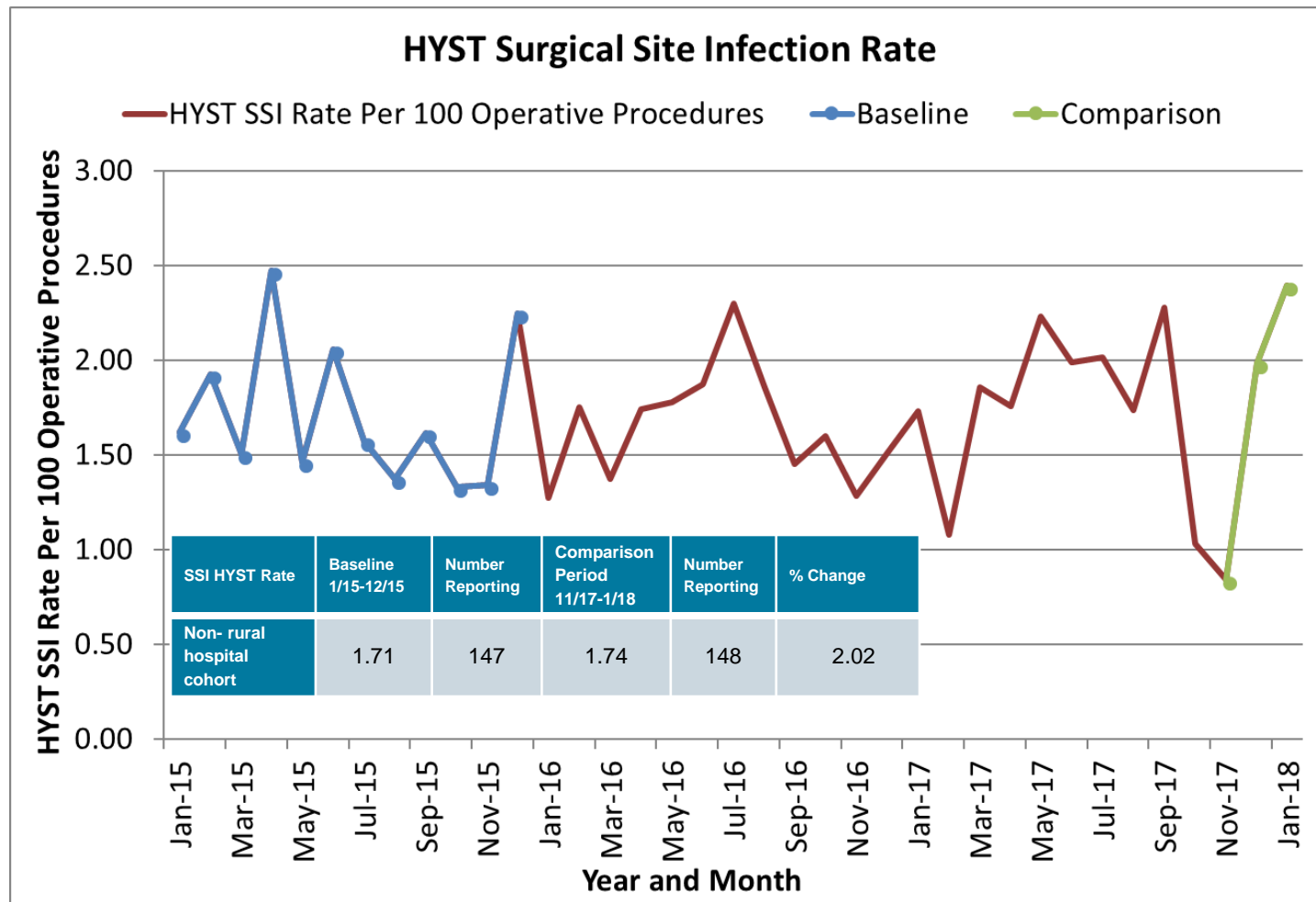


NYSPFP SSI Rate: Hip



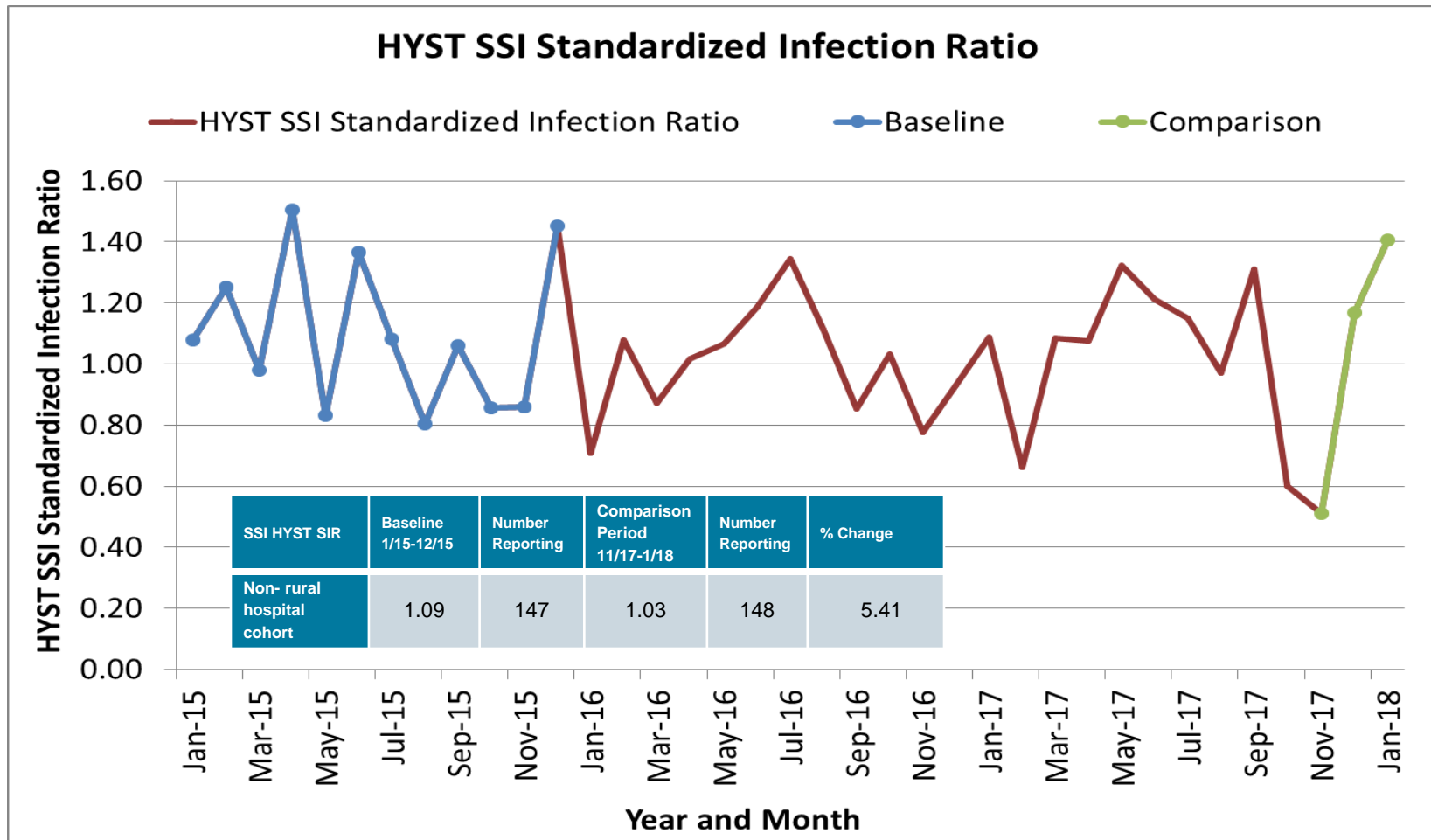


NYSPFP SSI Rate: Hysterectomy



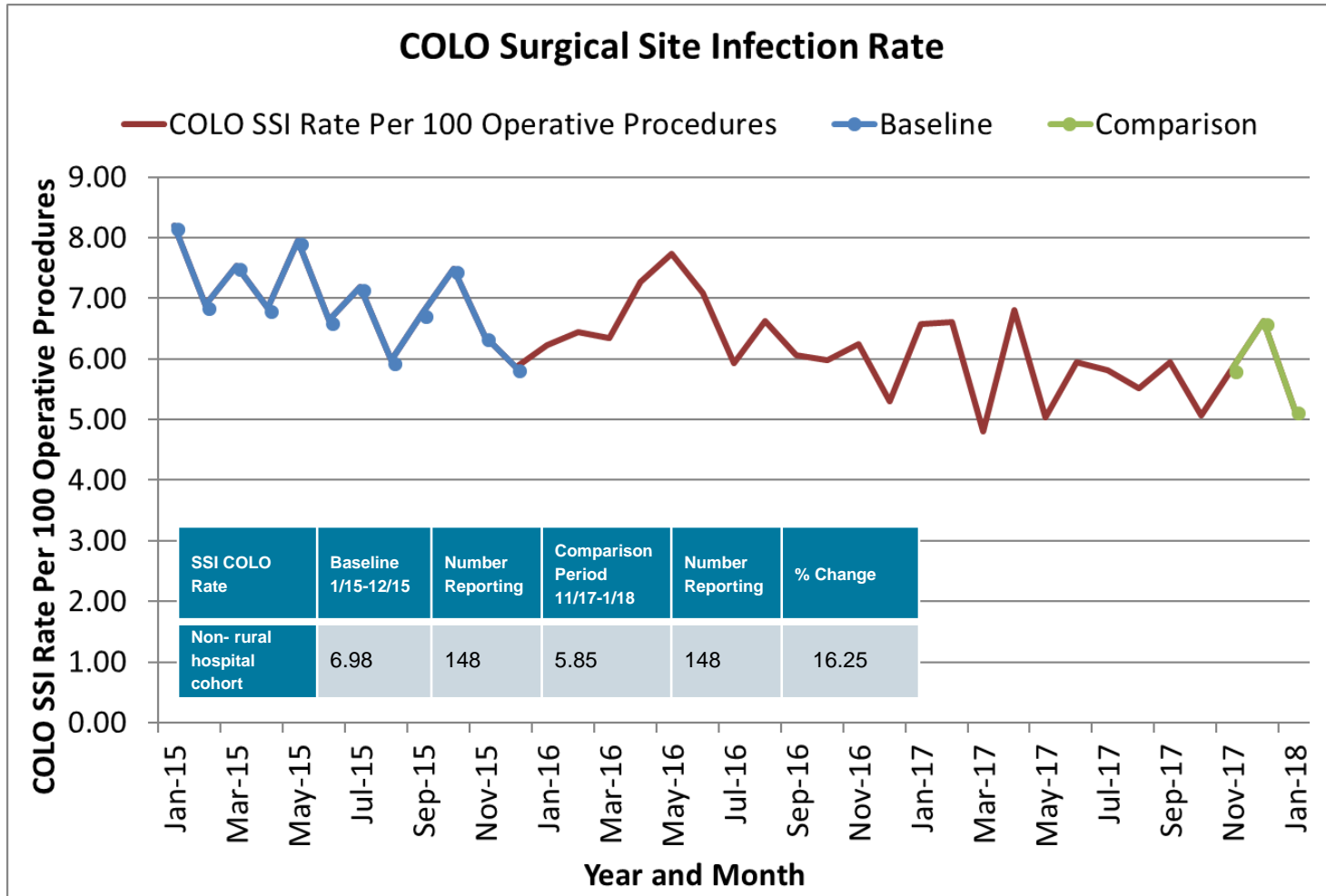


NYSPFP SSI SIR: Hysterectomy





NYSPFP SSI Rate: Colon





Surgery Bundle Elements Applicable Across Multiple Surgical Service Lines

Normothermia

Glucose Control

Antimicrobial
Prophylaxis

Increased
Perioperative
Oxygenation

Skin Preparation

Clean Standardized
Fascia Close

Wound
Management

**Colon Specific:
Mechanical Bowel
Preparation in
Combination with
Oral Antibiotics**

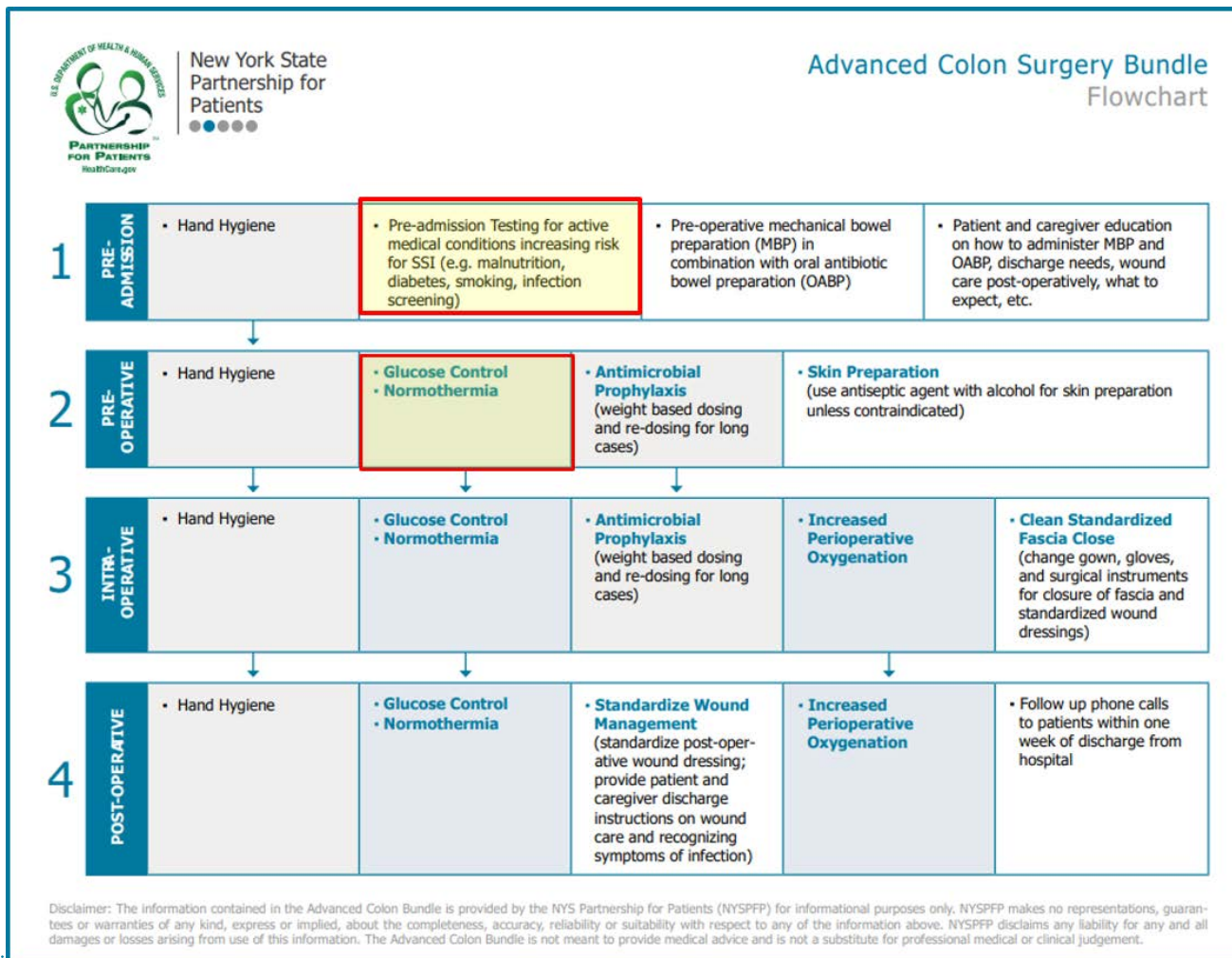


Implementation of Cross Applicable Bundle Elements

Surgical subspecialties where implementation of bundle has begun	% of hospitals that have started implementation in NYSPFP (n=111)*
Hysterectomy	55%
Cardiac Surgery	14%
Orthopedics (Hip/Knee prosthesis)	61%
Our hospital has not begun implementation of the colon bundle on any other surgical subspecialties	17%
Other	15%



NYSFPF Advanced Bundle Pre-operative Interventions

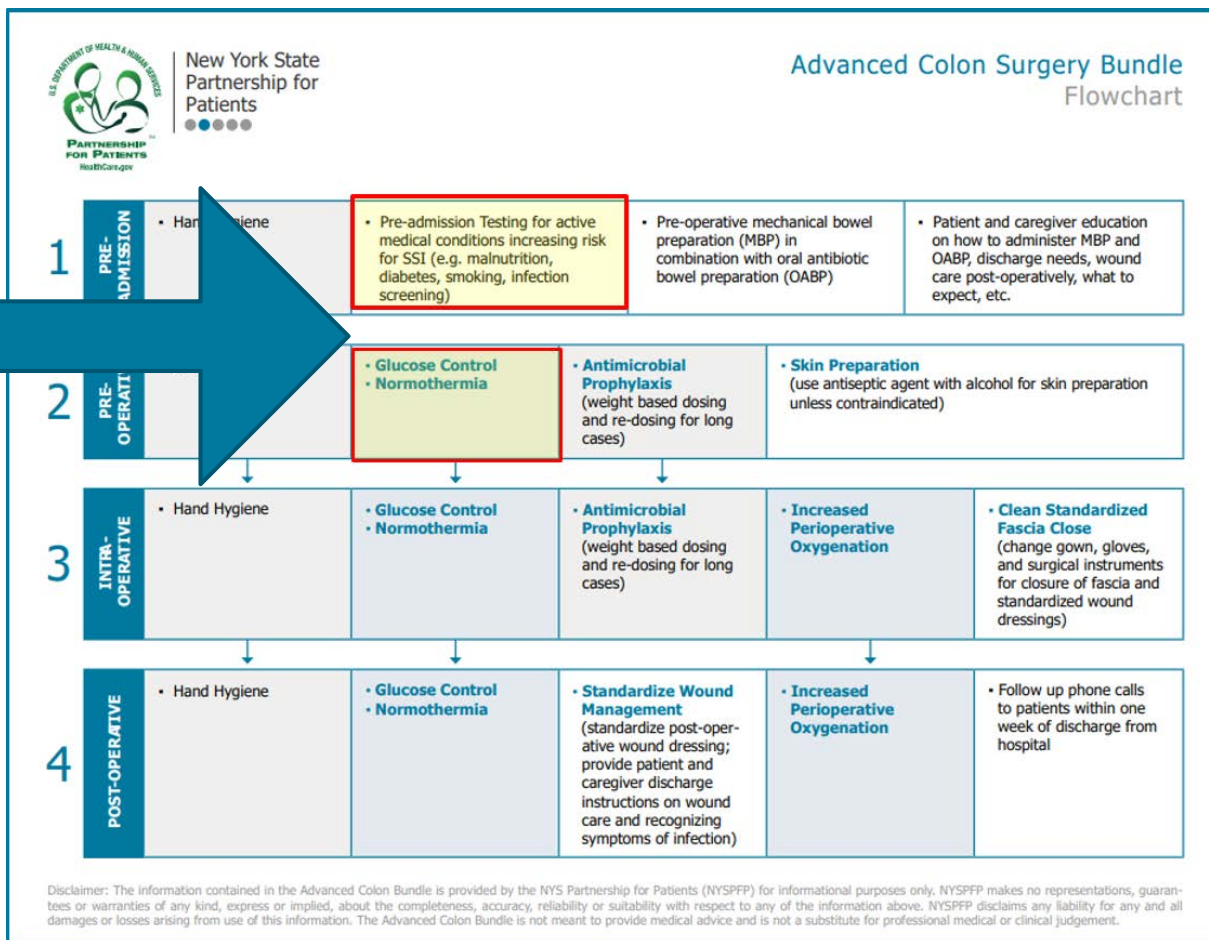




NYSFPF Advanced Bundle Pre-operative Interventions

Strong For Surgery also encourages:

- Malnutrition screening
- Blood sugar control
- Smoking cessation





Access Strong for Surgery tools from the NYSPFP Website

U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES
Partnership for Patients
 HealthCare.gov

New York State Partnership for Patients

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

myNYSPFP ABOUT **INITIATIVES** CALENDAR DATA CONTACTS

Surgical Site Infections

Infection Prevention Initiatives

INITIATIVE OVERVIEW MEETING MATERIALS **TOOLS & RESOURCES**

Check this page often for updated tools and resources from the NYSPFP Surgical Site Infection and OR Safety Initiative.

Suggested Best Practices and Corresponding Tools & Resources

- Operating Room Safety
- NYSPFP Advanced Colon Bundle
- SSI Reduction E-learning Resources

Reference Guides:

- NYSPFP Advanced Colon Bundle Resource Guide
- NHSN Surgical Site Infection Surveillance
- World Health Organization Surgical Safety Checklist
- American College of Surgeons: Strong For Surgery Toolkit**

1. Click on link and register on website.
2. Password for Strong for surgery website will appear in a popup box.
3. Enter password to access resources



Polling Question

- Has your hospital implemented a pre-operative patient optimization bundle?
 - Yes, for all surgeries
 - Yes, for specific surgeries only
 - No, not yet



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A Hospital-Based Preoperative Clinic Implementation of Enhanced Recovery After Surgery & Strong For Surgery

CHRISTUS St. Michael Health System
Texas



A Hospital-Based Preoperative Clinic Implementation of Enhanced Recovery After Surgery & Strong For Surgery

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Nurse Practitioner, Pre-Admission Center

CHRISTUS St. Michael Health System, Texarkana, TX

Disclosure: I have no financial relationships to report

Objectives

- ▶ Discuss implementation of Enhanced Recovery After Surgery (ERAS) & Strong For Surgery (S4S) principles, within a community-based hospital pre-operative clinic
- ▶ Explain the components of ERAS & S4S
- ▶ Share successes, lessons learned, and future steps
- ▶ Q&A



Multidisciplinary Team Approach

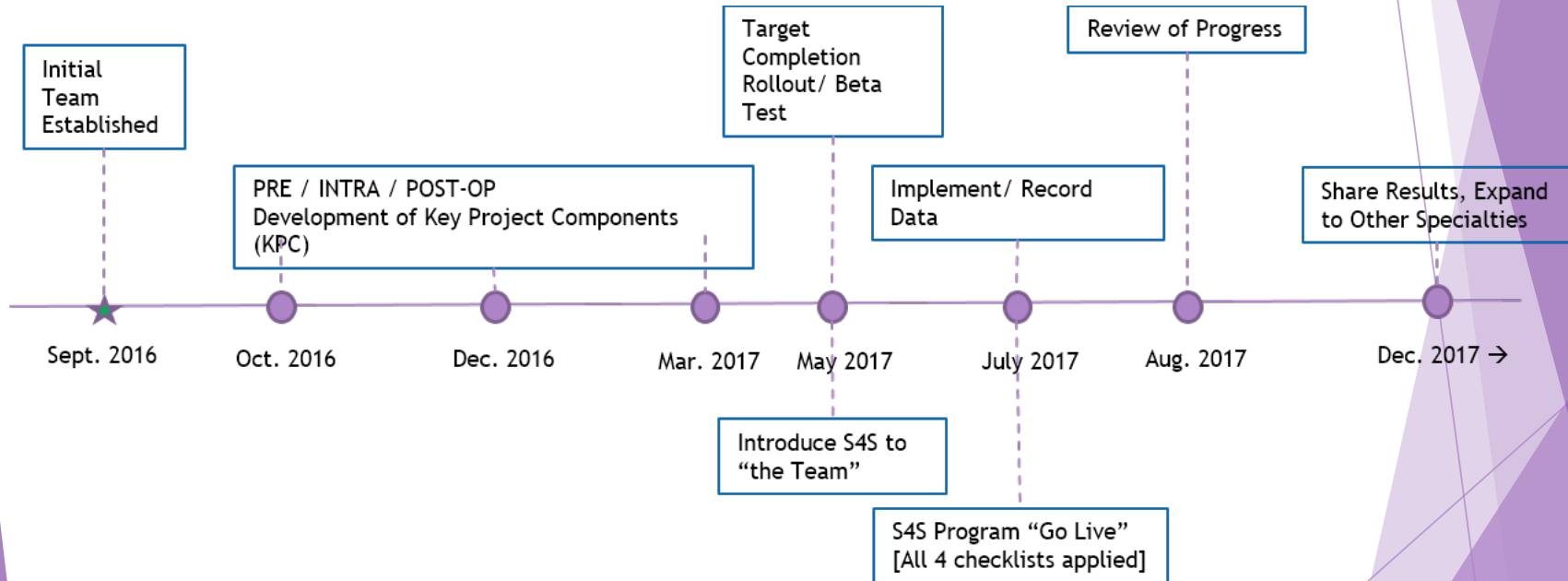


- Surgeon Champion
- Anesthesia
- Surgical Services
- Nurse Educator
- Clinical Informaticist
- Quality Outcomes
- Risk Management
- Marketing
- Administration
- Physical Therapy
- Nursing
- Case Management
- Respiratory
- Pharmacy
- Dietary
- Physician Office Staff
- Critical Care



Timeline for ERAS & S4S

Enhanced Recovery After Surgery (ERAS)



Strong for Surgery (S4S)



Components Addressed in the Pre-Op Clinic

ERAS	S4S
Pt. Education (Pre-op, Post-op, and Discharge Instructions)	Glycemic Control
Carbohydrate Loading	Nutrition
NSQIP Variables Identified	Tobacco Cessation
	Medications
	*Pain Management
	*PreHab / Frailty
	*Delirium in Elderly
	*Pre-Surgery Education

**Future S4S Components [Pending]*



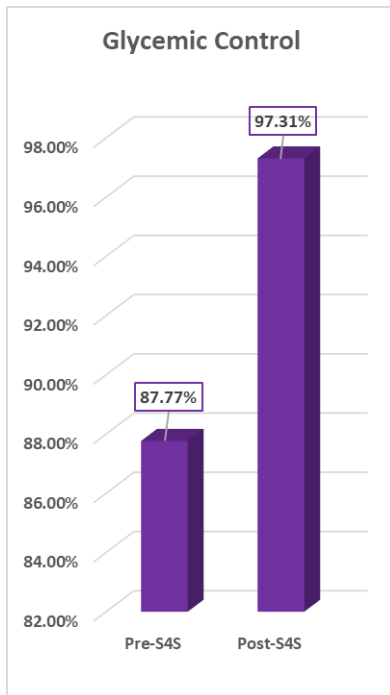
ERAS – Colorectal Results*



*ERAS started with Colorectal



S4S – Glycemic Control Results



S4S principles applied to ALL surgical patients seen in the Pre-Op Clinic by Nurse Practitioner

S4S – Smoking Cessation Results

10.2% of tobacco users quit smoking as defined by patient reported outcomes.



S4S Nutrition & Medications

▶ Nutrition

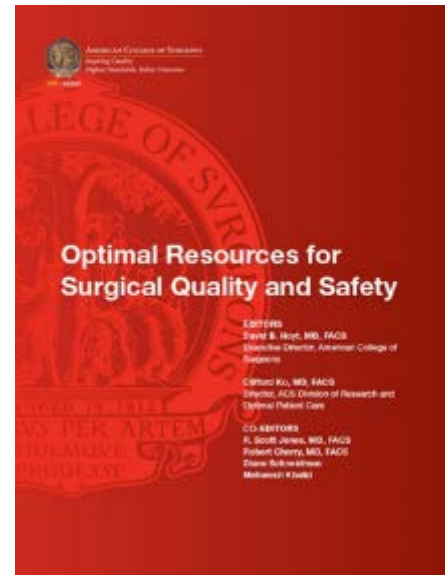
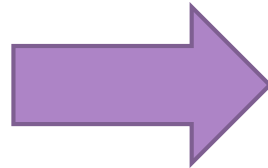
- ▶ Assess for malnutrition, appetite, and ability to take food orally
- ▶ An albumin level <3.5 can be used to assess for post-op complications
- ▶ For complex surgeries we recommend supplementation with an immunomodulating supplement

▶ Medication Optimization

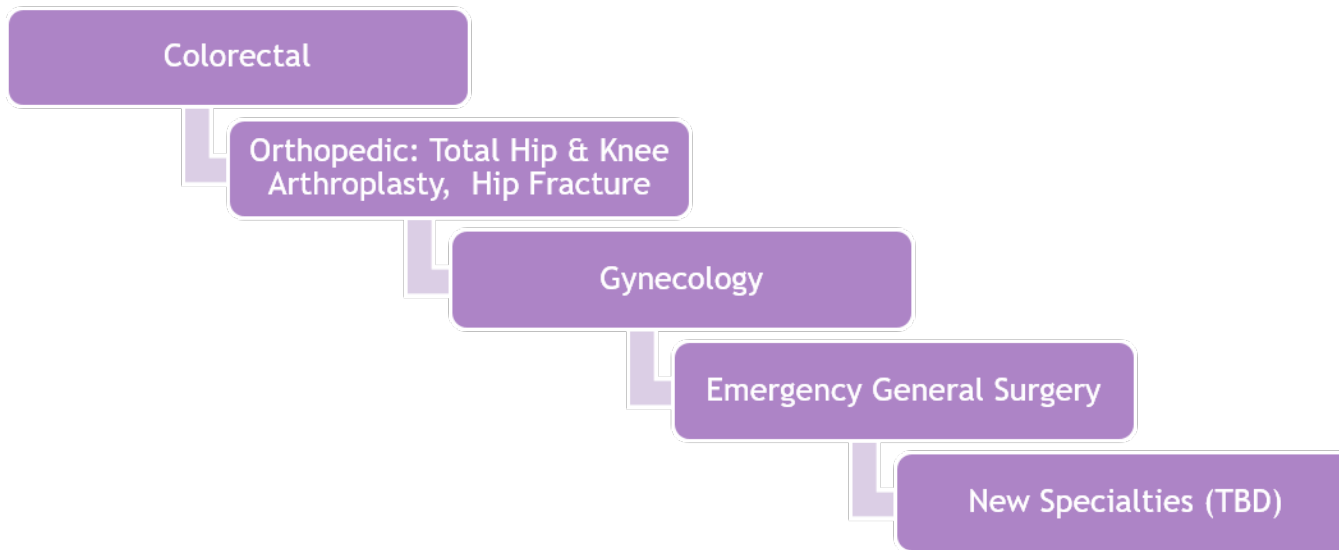
- ▶ Assess for bleeding risks
- ▶ Beta blockers continued
- ▶ Continuation of ASA when appropriate.



Continuing the Journey



ERAS Implementation*



**AHRQ / ISCR pathways are modeled for this implementation*



Lessons Learned

1. **Strong Leadership is key [e.g. Physician, Senior leadership, Front line management]**
2. **Engagement of key stakeholders**
3. **Establishing the right environment and mindset for a cultural change**
4. **Critically / honestly looking at process issues vs. “people issues”**
5. **Continuously affirming the vision – Improving patient outcomes**
6. **Clear, concise, and timely communications with physician stakeholders**
7. **Validating progress and celebrating wins**
8. **Building a culture of “perpetual improvement”**



Appendix – Files Are Available For Download

STRONG FOR SURGERY Overview of Strong for Surgery

Strong for Surgery is a public health campaign that engages patients and their surgeons to improve overall health and increase the likelihood of a positive surgical outcome. The pre-surgical checklists are a communication strategy for patients and clinicians to consider four common risk factors.



NUTRITION

Nutrition status is currently the single most important independent predictor of outcomes in any type of surgery. Assessment for nutritional weight loss, change in dietary habits, and gastrointestinal symptoms can indicate that a patient may be at risk and should be referred to a registered dietitian for nutritional counseling. To prevent immune suppression in surgery patients, which increases infection rates, use of a specialized nutrition formula can reduce infection complications by 40-60%.

SMOKING CESSATION

Smoking combined with 40% higher probabilities of post-operative complications and a 30% increased risk for infection and wound-healing events after surgery. Patients who undergo cancer surgery have a 2-3 times higher rate of cancer recurrence for colon cancer, and are 30% more likely to recur after other cancers. Quitting smoking 4-6 weeks before surgery will have more positive and less deleterious effects compared to quitting at the last moment. To improve outcomes in patients currently smoking, consider an online patient-to-doctor smoking cessation tool that patients can begin using 4-6 weeks out and have been proven to increase quit rates.

MEDICATION USE

A thorough review of all medications, over the counter drugs, supplements, and herbal remedies is important so that the patient can be advised of which medications to keep taking and which to discontinue before surgery. Evidence shows that aspirin and beta blockers can be safely continued throughout the perioperative period for cardiac protection with most surgeries. Some medications increase bleeding risks and should be stopped before surgery. Specific herbal medications (eg. Echinacea, Garlic, Gingko, Ginseng, Gins, Saw Palmetto, St. John's Wort, Valerian) can also increase risks.

GLYCEMIC CONTROL

Proper blood glucose control in diabetic patients having surgery can help lower the risk of surgical site infections, support healing, and lower the length of stay. Establishing control of blood glucose prior to surgery reduces the rates of high blood glucose (hyperglycemia) or low blood glucose (hypoglycemia) during the perioperative period. Studies have shown hyperglycemia to double the risk of surgical site infections. Checking blood glucose prior to surgery may identify patients that have undiagnosed diabetes, a reported one-third of all patients having surgery, and let clinicians start treatment before hospitalization.

Strong for Surgery is a program of the CERTAIN Learning Health Care Network, based in Washington State.


   strongforsurgery.org



preoperative
postoperative
and
discharge
instructions

ERAS

an ERAS Program of an ERAS







All Patients

Does the patient have a prior diagnosis of diabetes?

Yes No

Patient's age > 45?

Yes No

Patient's BMI ≥30?

Yes No

If YES to any of the questions:

- Check fasting blood sugar level on the morning of surgery prior to OR case
- If fasting blood glucose level > 200, then recommend use of Insulin drip during OR case

Diabetic Patients

Degree of Blood Sugar Control:

Hemoglobin A1c level > 7.0%?

OR

Has any fingerslick reading in the past 2 weeks been >200?

Yes No

If YES or UNKNOWN then:

- Referral for diabetes management

Diabetic Patients

Perioperative Management:

Will the patient be NPO after midnight?

Yes No

Is the patient having bowel prep?

Yes No

If YES, while NPO and during prep:

- Stop all diabetic medications except for pioglitazone (Actos)
- Reduce Lantus by 50%
- Check blood sugars frequently and use sliding scale as needed

IMPORTANT NOTICE

These sample checklists are provided for informational purposes only and should NOT be used in the care of a patient outside of a comprehensive preoperative program such as Strong for Surgery. Patients should not rely on information on this checklist as an alternative to medical advice from a doctor or other professional healthcare provider. The logos on the checklists are registered trademarks of Strong for Surgery and SCOAP. To find out how you can start using the Strong for Surgery checklist in your clinic, please contact us at strongforsurgery@strongfor.com

Version 1.08 Revised 12/18/12

Medication Checklist



Bleeding Risks

Is the patient on a prescribed anti-coagulant (ex. Coumadin, Plavix, other)?

Yes No

If YES then:

Discuss with prescribing MD the safety of stopping medication 1 week prior to surgery

Is the patient taking over the counter medications that increase bleeding risk (ex. NSAIDS)?

Yes No

If YES then:

Consider stopping all over the counter medications that can increase risk of bleeding 2 weeks prior to surgery

Beta-Blockers

Is the patient taking a beta blocker?

Yes No

If YES then:

Patient should take throughout perioperative period

Aspirin

Is the patient taking aspirin for cardiac protection?

Yes No

If YES then:

Patient should take throughout perioperative period

Herbal Medication

Is the patient taking herbal supplements containing ingredients that may increase perioperative risk (e.g. Echinacea, Garlic, Ginkgo, Ginseng, Kava, Saw Palmetto, St. John's Wort, Valerian)?

Yes No

If YES then:

Consider stopping all herbal supplements that increase perioperative risk 2 weeks prior to surgery

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Version: 1.08 Revised 10/1/13

Nutrition Screening Checklist



Screening for Malnutrition

Is BMI less than 19?

Yes No

Has the patient had unintentional weight loss of over 8 pounds in the last 3 months?

Yes No

Has the patient had a poor appetite – eating less than half of meals or fewer than two meals per day?

Yes No

Is the patient unable to take food orally (ex. dysphagia, vomiting)?

Yes No

If YES to any of the questions:

Referral to Registered Dietitian for evaluation unless currently receiving nutrition therapy

Lab Tests for Risk Stratification

If YES then:

Is the patient having inpatient surgery?

Yes No

Check albumin level to assess complication risk after surgery

Supplementation

If YES then:

Is the patient having complex surgery (example: GI anastomosis)?

Yes No

Give evidence-based immune modulating supplementation

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Version 1.0? Revised 01/25/2013



Risk Stratification

Has the patient ever smoked?

If YES then:

Record Patient's Smoking Status

- Current Smoker
- Former Smoker

Record number of pack-years
(packs per day x years smoking)
Pack Years _____

Does patient currently smoke?

If YES then:

Advise the patient to stop smoking and
set quit date within 2 weeks
Quit Date _____

- Refer patient to preferred cessation program
Program Selected
 - Freedom From Smoking (ALA)
 - Plan My Quit
 - Become An Ex
 - 1-800-quit-now

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Version 1.02 Revised 1/26/16



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Hospital Discussion and Questions

Hospital Participants

Facilitated by NYSPFP Staff



Next Steps

- Access the Strong for Surgery Toolkit from the NYSPFP website
 - <https://www.nyspfp.org/Members/Initiatives/InfectionPrevention/SSI/Tools.aspx>
- Contact your project manager to discuss:
 - Using the Strong for Surgery Toolkit to implement pre-operative optimization for elective surgery patients.
 - Hardwiring the Advanced Colon Bundle Elements into workflow and expanding to other types of surgery if you have not already