



New York State
Partnership
for Patients



Enhanced Recovery After Surgery in Combination with the Advanced Colon Bundle

September 2017

*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 State	NYSPFP Staff
Colorectal Surgery SSI Prevention Bundle and ERAS	Christopher Mantyh, MD, FACS/FASCRS Professor of Surgery Duke University Medical Center
Hospital Questions and Discussion	Hospital Participants NYSPFP Staff
Next Steps	NYSPFP Staff



Why Focus on Surgical Site Infections (SSI)?

- 2.6% of 30 million operations per year are complicated by SSIs (800,000–2 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:
 - Increased length of stay
 - Increased hospital costs (estimated increase of \$1,300–\$5,000 per case)
 - Increased patient morbidity and mortality
 - Increased readmission rates

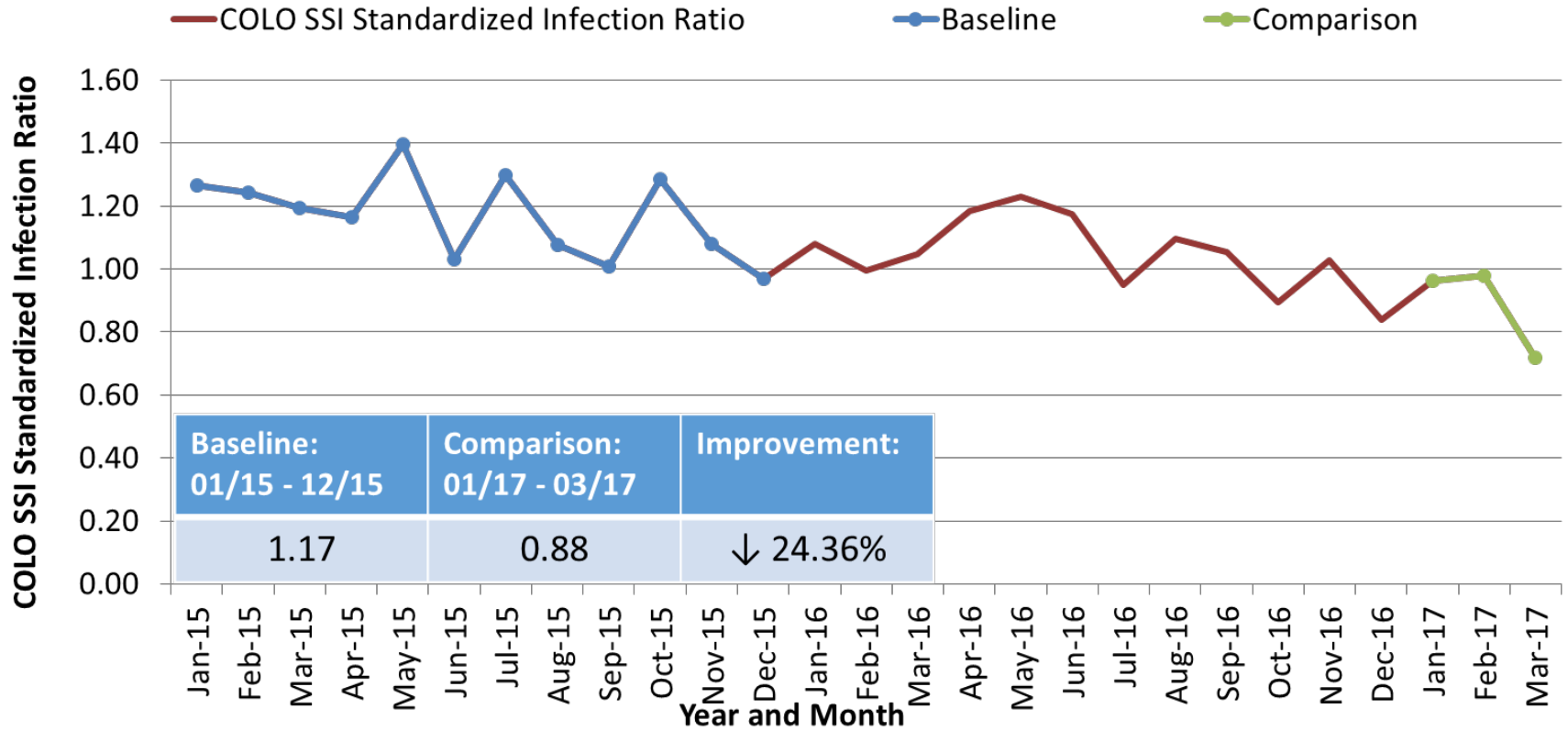
References:

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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 SIR: Colon

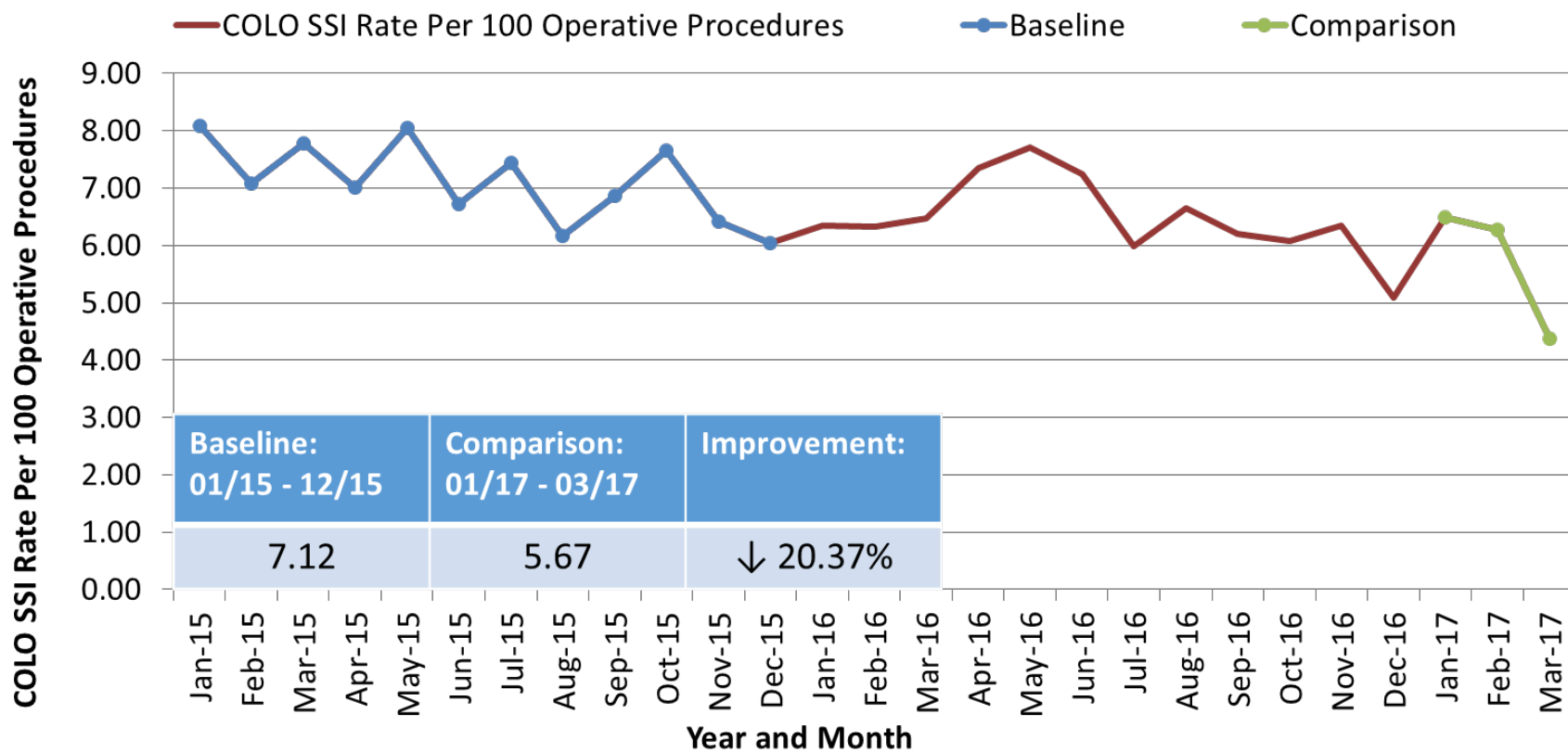
COLO SSI Standardized Infection Ratio





NYSPPFP SSI Rate: Colon

COLO Surgical Site Infection Rate





NYSPFP SSI Rates

Procedure – <i>Rate per 100 operative procedures</i>	Baseline 01/15-12-/15	Comparison 01/17-03-17	Improvement
Coronary Artery Bypass Graft (CABG)	2.60	1.29	↓ 50.61%
Hip Replacement	1.06	0.81	↓ 23.04%
Hysterectomy SSI Rate	1.76	1.65	↓ 6.01%



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**



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 peri-operative period to expedite recovery
 - Common modalities in ERAS can include (but are not limited to):
 - Early removal of drains
 - Optimized pain management
 - Early enteral nutrition
 - Pre-operative 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 re-operations
 - 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



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Colorectal Surgery SSI Prevention Bundle and ERAS

Christopher Mantyh, MD, FACS/FASCRS
Duke University Medical Center



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Hospital Questions and Discussion

Hospital Participants

NYSPFP Staff



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Tools to Support SSI Reduction

NYSFPF Staff



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
 - <http://www.aana.com/resources/professionalpractice/Pages/Enhanced-Recovery-After-Surgery.aspx>

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



Next Steps

- Contact your Project Manager to discuss:
 - Hardwiring advanced colon bundle elements into workflow
 - Incorporating ERAS elements into the advanced bundle to continue reduction of SSI Rates
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