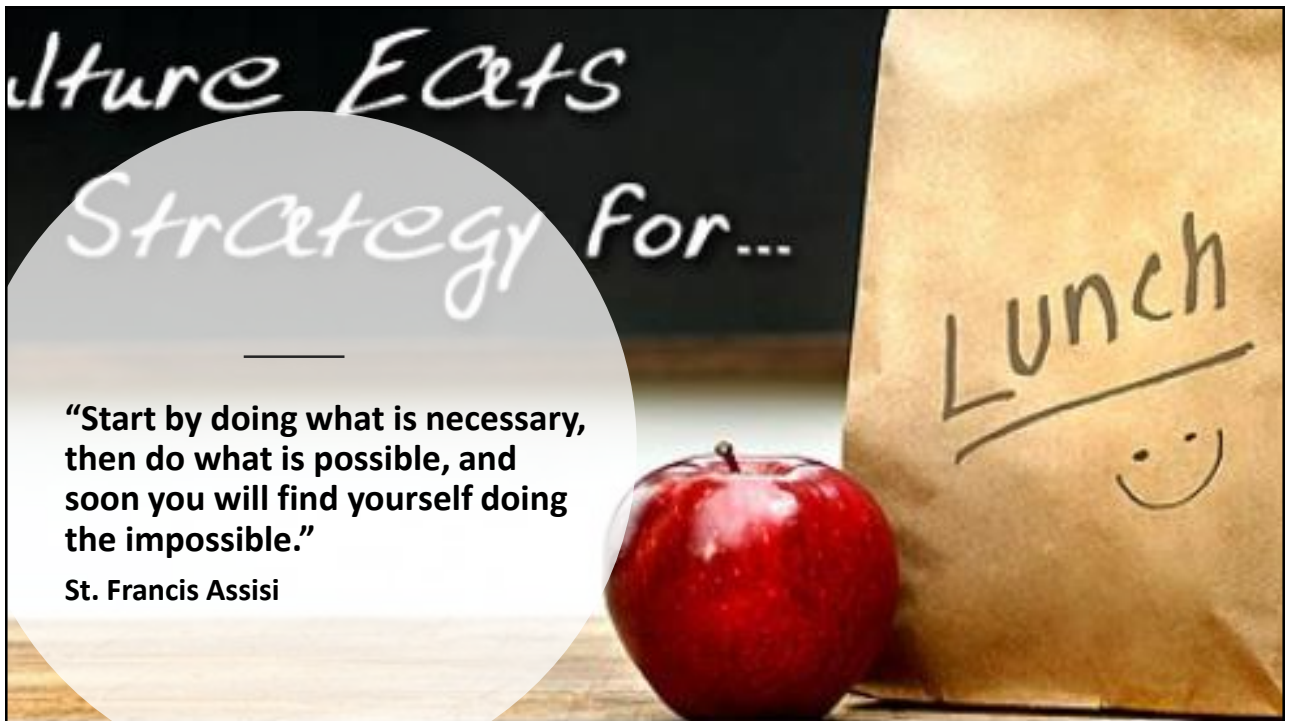
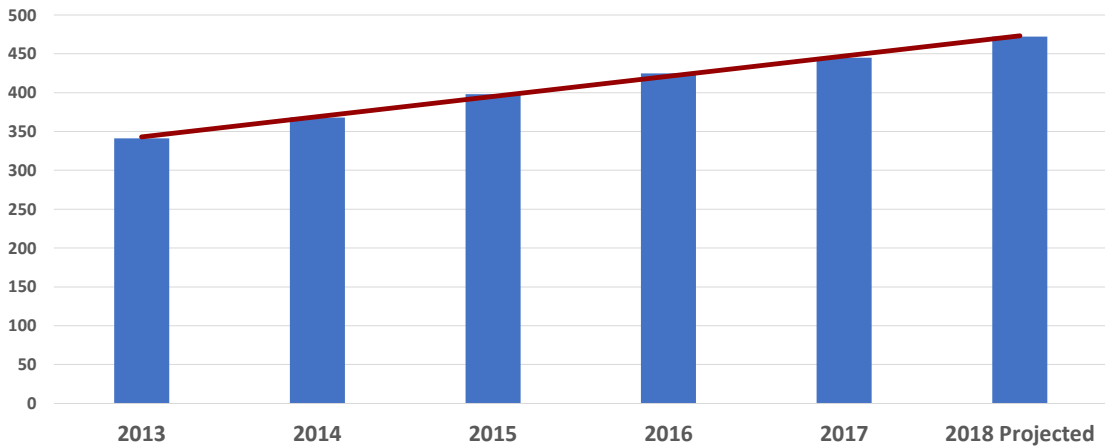


# Change Management and Chaos Theory Implementing a Hip and Knee Bundle

Dr. Linda Rasmussen, MD



## Hip and Knee Volume 2013-2018



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## Joint Care Timeline

- 1998** Implemented the Joint Center
- 2010** Joint Care Accreditation
- 2013** Makoplasty robotics
- 2013** Community Education sessions with the Ortho Surgeon
- 2015** Nurse Practitioner for screening patients preoperatively
- 2016** Implemented a robust Preoperative Clinic
- 2016** Joint Care Coordinator
- 2017** Implemented Hip/Knee Bundle across Adventist Health
- 2017** MRSA/MSSA lab equipment in place with 90 minute read out
- 2017** NAVIO robotics implemented



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## Drivers for Change

- **Clinical Outcomes: Chasing Zero Harm**
- **Customer Experience: Love Matters**
- **Engagement of ALL Orthopedic Surgeons across system**
- **System-Wide Adoption of Best Practice: Execute Strategy**



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## Stakeholders

- **Orthopedic Surgeons**
- **Anesthesia Providers**
- **Patients & their Support People**
- **Perioperative Staff**
- **Preoperative Clinic**
- **Inpatient Med/Surg Units**
- **Intensive Care**
- **Primary Care Physicians/Office Staff**
- **Emergency Department**
- **Laboratory Personnel**
- **Rehabilitation Staff**
- **Joint Care Coordinator**
- **Infection Prevention Team**
- **Hospitalists**
- **Administration**



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## Barriers for Change

- **Patient Education on MRSA/MSSA**
  - Testing and treatment process and timing
  - Patient understanding of what a positive culture result means
  - Isolation precautions in hospital
  - Addressing any possible stigma patients might feel
  
- **Staff Education throughout the hospital**



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## Barriers for Change

- **Lack of Equipment in the Lab for Screening for MRSA/MSSA**
  - Outsourced with 2 day turnaround
- **Neighbor Island patient challenges with screening & preparation**
- **Physician office staff** (Orthopedic offices, PCP offices on all islands)
- **Reporting process for lab results and follow up**
- **Documentation process**—paper or digital and ensuring completion



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# Hip & Knee Bundle Elements Implemented

- Pre-Op education class completion
- Pre-Op CHG Bathing done night before and AM of surgery
- MRSA/MSSA Screening completion
- MRSA positive:
  - Pre-Op CHG Bathing done each day 5 days before surgery
  - Mupirocin BID for 5 days before surgery
- CHG wipe of surgical site in Pre-Op on day of surgery
- Nasal Povidone-Iodine administered day of surgery if indicated
- Alcohol-based skin prep used intra-operatively
- Antibiotic administered within 60 minutes prior to incision
- Implemented low carb diet post-operatively



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**Adventist Health - Castle Hip and Knee SSI Prevention Bundle Documentation Tool**

Date of Surgery: \_\_\_\_\_

Surgeon: \_\_\_\_\_ Procedure:  TKA  MAKO  THA  HEMI

Pre-Op Education class completed?  Yes  No

Initials \_\_\_\_\_ MRSA/MSSA Screening completed?  Yes  No

\_\_\_\_\_ If No - Explain: \_\_\_\_\_

\_\_\_\_\_ Date of result: \_\_\_\_\_ Result:  Pos  Neg  Unknown

**If MRSA/MSSA is Negative, Results Unknown, or Patient Not Screened:**

Pre-Op CHG bathing done night before surgery?  Yes  No

Number of times patient used CHG at Home?  1  2

CHG used by Pre-Op nurse on day of surgery?  Yes  No

If unknown or not screened, Nasal Povidone-Iodine administered day of surgery?  Yes  No

**If MRSA/MSSA is Positive:**

Pre-Op CHG bathing done x 5 days before surgery?  Yes  No

If No, Number of days CHG done before surgery?  1  2  3  4

Mupirocin BID x 5 days before surgery?  Yes  No

If No, Number of days CHG done before surgery?  1  2  3  4

CHG used by Pre-Op nurse on day of surgery?  Yes  No

Nasal Povidone-Iodine administered day of surgery if ordered by MD?  Yes  No

Initials _____	Alcohol-Based Skin Prep used Intra Op? <input type="checkbox"/> Yes <input type="checkbox"/> No	
	If No - Contraindication: _____	
Initials _____	Antibiotic Use?	
	Antibiotic administered within 50 minutes prior to incision? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Quality Dept _____	Additional Antibiotics ordered at any time after skin closure? <input type="checkbox"/> Yes <input type="checkbox"/> No	
RN Signature _____	Date _____	Time _____
RN Signature _____	Date _____	Time _____
RN Signature _____	Date _____	Time _____
<p><b>AH - Castle Hip &amp; Knee SSI Prevention Bundle Documentation Tool - Nursing Departments</b></p> <p>Form is for audit purposes only - Not a permanent part of medical record Please return to Quality Resources</p>		
		Patient Information Label

REVISED 3/20/17



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Perioperative Procedure Checklist

\*Performed on: 06/21/2018 1553 HST By: Raymond, Jane L

### Perioperative Check List

**Correct Date/Time?**

Is patient transferring to OR/Procedure area?  Yes  No **+** Patient assessment completed in iView  Yes  No

Date/Time of procedure see per procedure

Procedure name

Name of RN/Tech receiving report (Free Text)

**Transfer check list**

Appropriate M forms printed  Interpreter/Translator needed/used  
 Cardex updated  Orders/nurse review completed  
 Care plan updated  Valuables form updated  
 Informed consent completed by MD  Other:

**Preferred language**  
English

**Language used**

**\*Required: Interpreter/Translator/Preferred method of communication**

Valuables/Medications  
 MRSA/MSSA Screening

**Mandatory for all total, partial, and revision hip and knee joint replacement surgeries.**

**Allergy**  
No Known Medication Allergies 05/31/2018

Are you allergic to latex?  Yes  No **+** **If NO I have reviewed the patients' allergy history with the patient and they deny a latex allergy**

**Correct date/time?**

### SSI Prevention Bundle

**MRSA/MSSA Lab Screenings last 6 months**

MRSA Lab Screenings (6 Months)	
MRSA-screensings:	
S Aureus Real Time PCR	Negative (06/05/2018)

**If patient shows no MRSA/MSSA screening results in the past 30 days, review scanned results from clinic to determine if screening has been done.**

**\*\*\*Only complete the following screening items if there are no MRSA/MSSA results showing above.\*\*\***

**MRSA/MSSA Screening done?**  Yes  No **+** **Date screening was performed:** 06/05/2018 **Reason screening not performed:**

**Review PreOp bathing and decolonization procedure with patient:**  
**Did patient complete PreOperative education class?**  Yes  No **+**

**Comprehensive CJR sites only**  
**Did patient receive CMS CJR Model notification document?**  
 Yes  No  N/A



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Patient is MRSA/MSSA negative:	OR	Patient is MRSA/MSSA positive:	OR	Patient's MRSA/MSSA status is unknown:
<b>PreOp CHG bathing done at least the night before Surgery?</b> <input type="radio"/> Yes <input type="radio"/> No		<b>PreOp CHG bathing x5 days prior to Surgery?</b> <input type="radio"/> Yes <input type="radio"/> No		<b>PreOp CHG used day of surgery?</b> <input type="radio"/> Yes <input type="radio"/> No
<b>If yes, number of times patient used CHG at home?</b> <input type="radio"/> 0 <input type="radio"/> 3 <input type="radio"/> 1 <input type="radio"/> 4 <input type="radio"/> 2 <input type="radio"/> 5		<b>If no, number of days?</b> <input type="radio"/> 0 <input type="radio"/> 3 <input type="radio"/> 1 <input type="radio"/> 4 <input type="radio"/> 2		<b>Nasal povidone-iodine administered day of surgery?</b> <input type="radio"/> Yes <input type="radio"/> No
<b>CHG used by PreOp nurse day of surgery?</b> <input type="radio"/> Yes <input type="radio"/> No		<b>Mupirocin BID daily x5 days prior to Surgery?</b> <input type="radio"/> Yes <input type="radio"/> No		
		<b>If no, number of days?</b> <input type="radio"/> 0 <input type="radio"/> 3 <input type="radio"/> 1 <input type="radio"/> 4 <input type="radio"/> 2		
		<b>CHG used by PreOp nurse day of surgery?</b> <input type="radio"/> Yes <input type="radio"/> No		
		<b>Nasal povidone-iodine administered day of surgery?</b> <input type="radio"/> Yes <input type="radio"/> No		



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## Expectations

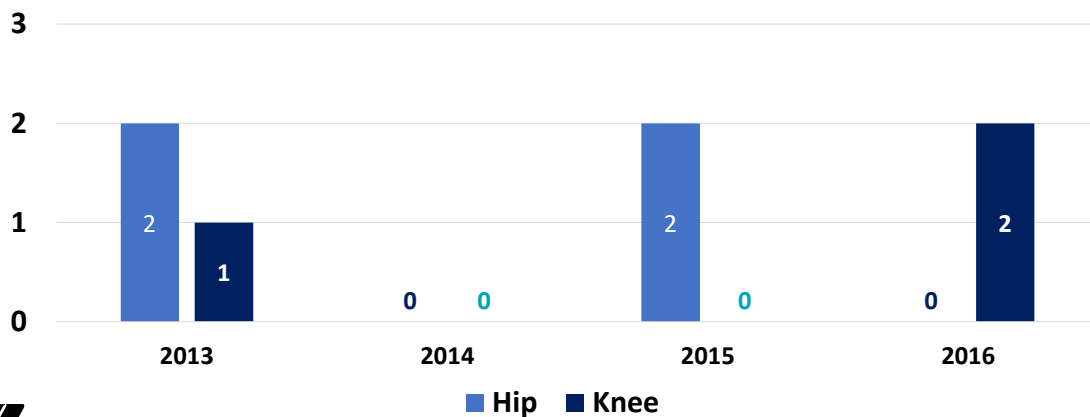
- Chasing Zero Joint Infections
- Meaningful collaboration on SSI surveillance
- Reduce complication rate
- Reduce readmission rate
- Decrease Length of stay
- Increase outpatient and observation cases
- Increase in patient and physician satisfaction



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## Pre-Bundle For Hip & Knee SSI Data

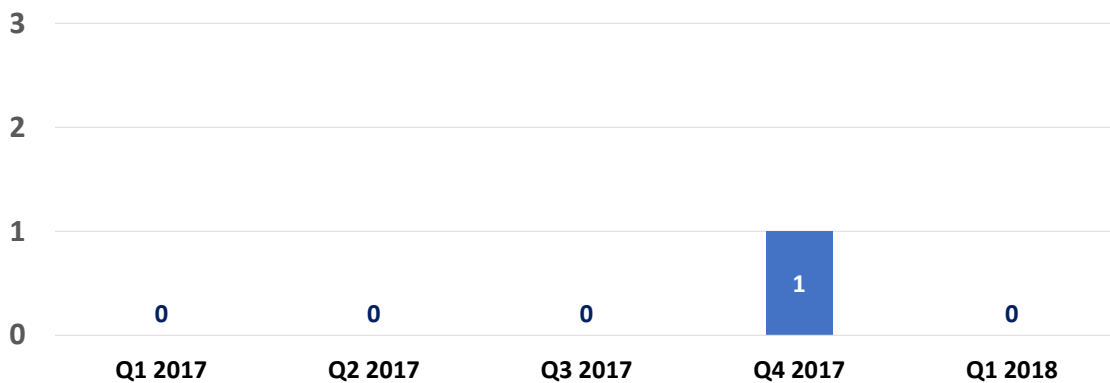
\*\*\*No Deep Space infections – only Superficial infections\*\*\*



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## Post-Bundle For Hip & Knee SSI Data

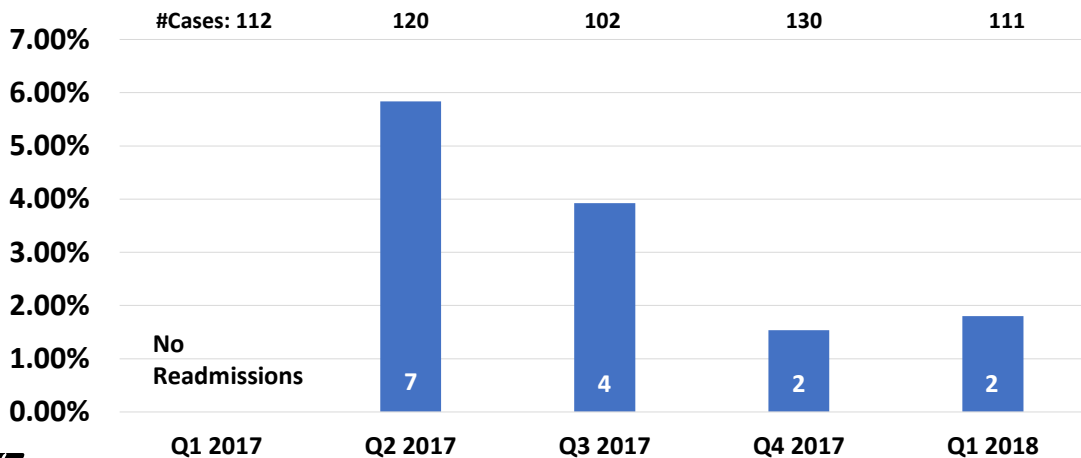
\*\*\*No Deep Space infections – only Superficial infections\*\*\*



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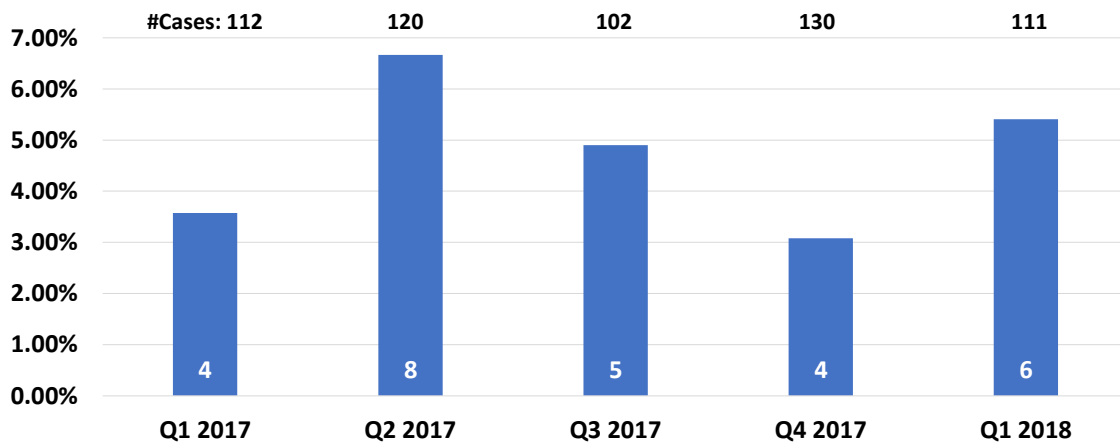


## Readmission Stats



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## Complication Rates



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## Additional Outcomes

- Slight increase in LOS for overall Hip and Knee inpatient LOS
- Increase in number of outpatient surgeries
- Significantly improved patient satisfaction scores
  - Low carb diet post operatively well liked by patients
- Physician satisfaction is top decile



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## Lesson Learned

- Change is hard: *“Culture eats strategy for lunch every day!”* -Peter Drucker
- Surgeon inclusion in the Bundle development is critical
- Prioritize this change
- Entire hospital and the clinics are affected
- Determine the process for documentation early
- Think about the data collection steps in advance
- Prep people for the change and get buy in
- Ensure your lab process can work smoothly with your plan
- Maximize use of Preoperative Clinic and remove barriers to patient access
- Leadership support helps drive Bundle implementation success



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## Conclusion

- **Implementing a Bundle is Worth it**
- **Adventist Health System**
  - 20 hospitals
  - Over 10,000 joints annually
  - Total of 39 SSIs in 2017
- **More changes are coming all the time**
- **Adopting a Bundle puts you in the mindset of standardization**
- **Bundle creates alignment that makes future changes easier**
- **Bundle is good precursor for outpatient joint surgery**
- **Safer Hawaii Collaborative is a great asset**



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