



# Project JOINTS: Joining Organizations In Tackling SSIs

May 15, 2012

## Today's Agenda

- Overview of Project JOINTS
- Enhanced SSI Prevention Bundle
- California Participation/Opportunities
- · Website/tools overview and tour
- Q & A





# What is Project JOINTS?

- An IHI initiative funded by the federal government
- Participants will receive support from IHI in the form of in-person and virtual coaching on how to test, implement and spread the enhanced SSI prevention Bundle comprised of three new evidence-based practices
- Exclusively for 10 states right now





#### Why focus on hip and knee arthroplasty?

- Over 1.1 million hip and knee arthroplasty procedures per year in the U.S.
- Knee arthroplasty surgical site infection (SSI) rates range from 0.68% to 1.60% and hip arthroplasty SSI rates range from 0.67% to 2.4% depending on patient risk. At these rates, between 6,000 and 20,000 SSIs occur annually.
- Estimated hospital costs alone: hip arthroplasty \$100,000 and knee arthroplasty \$60,000 with 22 day increase in length of stay
- · Substantial impact on patients





#### Who

- IHI
- RAND
- Expert faculty
- 10 states AR, CA, CO, DC/MD, MI, MS, NY, OR, TN, WI
- Professional Organizations in support:
  - American Academy of Orthopaedic Surgeons (AAOS/Academy)
     "The JOINTS project is a remarkable endeavor and the Academy looks forward to working with you to accomplish the goal of eliminating preventable SSIs."
  - AORN





# Project JOHNS Cohort 1 and 2 States Project JOHNS Cohort 1 and 2 States Output Description Figure Figure

Field Team				
Wave 2 States	Partners			
California	Health Services Advisory Group California Hospital Association California Hospital Patient Safety Organization Cynosure Health Hospital Council of Northern and Central California Hospital Association of Southern California Hospital Association of San Diego and Imperial Counties Association of California Nurse Leaders			
D.C./Maryland	Delmarva Foundation Maryland Patient Safety Center DC Hospital Association			
Mississippi	Information & Quality Healthcare Mississippi Hospital Association			
Oregon	Oregon Medical Association Oregon Association of Hospitals and Health Systems Acumentra Oregon Patient Safety Commission State Office of Rural Health Oregon Nurses Association			
Wisconsin	Metastar Wisconsin Hospital Association Wisconsin Medical Society			





# Enhanced Surgical Site Infection Prevention Bundle

#### · New Practices:

- Use of an alcohol-containing antiseptic agent for preop skin prep
- Preop bathing or showering with chlorhexidine gluconate (CHG) soap
- Staph aureus screening and use of intranasal mupirocin and CHG bathing or showering to decolonize staph aureus carriers

#### · Applicable SCIP practices:

- Appropriate use of prophylactic antibiotics
- Appropriate hair removal





# Use an alcohol-containing antiseptic agent for preoperative skin preparation

- Adequate preoperative skin preparation to prevent entry of skin flora into the surgical incision is an important basic infection prevention practice.
- Preoperative skin preparation of the operative site involves use of an antiseptic agent with long-acting antimicrobial activity, such as chlorhexidine and iodophors.
- Two types of preoperative skin preparations that combine alcohol (which has an immediate and dramatic killing effect on skin bacteria) with long-acting antimicrobial agents appear to be more effective at preventing SSI than povidone-iodine (an iodophor) alone:

—CHG plus alcohol — lodophor plus alcohol



# Use an alcohol-containing antiseptic agent for preoperative skin preparation

**Behavioral Objective:** Change the operating room skin prep for hip and knee arthroplasty to a long-acting antiseptic agent in combination with alcohol.

#### Assess your current process and potential barriers:

- Identify surgeons currently using an alcohol-based skin prep to champion the change in practice with their peers.
- Determine the high-volume surgeons and focus your efforts on working with them.
- Conduct brief interviews with representative surgeons to identify any misconceptions or key barriers to using an alcohol-based skin prep.
- Provide a brief summary of the scientific evidence supporting change to an alcohol-containing skin prep to influence change of habit/tradition.





#### Ask Patients to bathe or shower with CHG soap for at least 3 days prior to surgery

- Studies show that repeated use of CHG soap for bathing or showering results in progressive reductions in bacterial counts on the skin
- Patients may benefit from bathing or showering with CHG soap for at least 3 days before surgery in order to achieve the most benefit. It is unknown whether using CHG soap for longer time periods (e.g., five days) has additional benefit.
- No clear evidence that CHG bathing reduced the risk of SSI, although most studies used only 1-2 applications of CHG washes.
  - Webster J, et al, Cochrane Database of Systematic Reviews 2007, Issue 2. Art. No.: CD004985. DOI: 10.1002/14651858.CD004985.pub





#### Ask patients to bathe or shower with chlorehexidine gluconate (CHG) for at least 3 days prior to surgery

Behavioral Objective: Provide patients with chlorhexidine soap, and have them use the soap in bathing or showering for at least three days before surgery.

#### Assess your current process and potential barriers:

- Assess where most preoperative assessments take place
- Assess current preoperative communication between the hospital OR department and the offices of orthropaedic surgeons inside and outside
- Tailor the implementation process to your setting
- · Develop a process flow diagram to define all components of the process





#### Screen patients for Staphylococcus aureus (SA) carriage and decolonize carriers with 5 days of intranasal mupirocin and at least 3 days of CHG prior to surgery

- Patients who carry SA in their nares or on their skin are more likely to develop SA SSIs. This is true for methicillin-resistant as well as methicillin-sensitive
  - SA.Kluytmans et al, J Infect Dis 1995;171:216-9
  - Huang SS, Platt R. Clinical Infectious Diseases, 2003;36(3):281-5.
- The combination of intranasal mupirocin and CHG bathing or showering eliminates SA, at least temporarily, from the nares and skin, the natural reservoirs where SA is most often carried
- Results of several studies, including studies in orthopedic surgery, suggest that preoperative intranasal mupirocin reduces the risk of SSI for SA carriers.
  - Kalmeijer MD, et al, Clin Infect Dis. 2002;35(4):353-8
  - van Rijen MM, et al, J Antimicrob Chemother 2008;61(2):254-261





#### Screen patients and Decolonize SA carriers w/5 days intranasal mupirocin & 3 days CHG

Behavioral Objective: Screen all patients for Staphylococcus aureus prior to surgery, allowing enough time for those who screen positive to be decolonized with five days of intranasal mupirocin.

#### Assess your current process and potential barriers:

- Assess where most preoperative assessments take place
- · Tailor the intervention to the setting in which preoperative assessment is
- · Work with Lab to assure screening includes both MRSA and MSSA
- Develop a process to assure info on screening and decolonization is available at the time of surgery
- Develop a process flow diagram to define components of the process





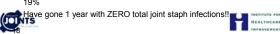




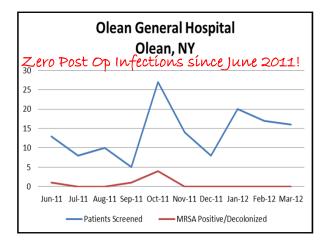
## What are we learning?

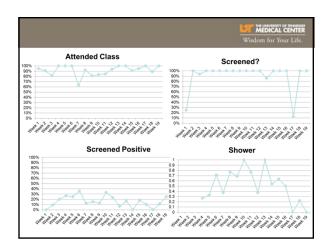
# Canton-Potsdam Hospital Potsdam, NY

- » 100% compliance achieved for 6 month time period ( May Dec 2011)
- Surgeons ordered joint protocol for all patients
- All patients consented to testing
- Pre-op nurses successfully collected nasal swabs, diligently checked results and provided patient education to MSSA and MRSA positive patients. All positive patients completed decolonization
- All patients were given correct antibiotic at the correct time on day of surgery
- All patients received the appropriate surgical skin prep
- Total of patients tested: 97
- MRSA/MSSA in our patient population captured with screening











## **Tools Provided**

- Project JOINTS call series
- Enhanced Surgical Site Infection Prevention Bundle How-to Guide
- Project JOINTS one-pager: summary of the evidence
- American Academy of Orthopaedic Surgeons (AAOS) letter of support
- Frequently Asked Questions "living" document





## **Tour of Resources**









#### Press Release Template

#### IHI Tools & Resources

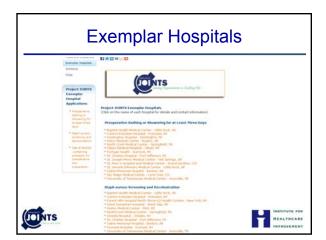
- \* A Brief for Hospital Administrators: The Business Case Financial implications for preventing hip or knee replacement SSIs

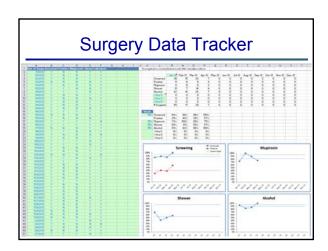
\* Project JOINTS Data Tracking Tool An excel document designed to aid you in tracking your compliance with the Enhanced Surgical Site Infection Bundle. We advise you right click the link and save the document directly to your computer. Click here for a link to a Webs: kutorial.

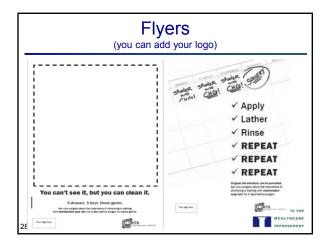
Slide Presentations to Introduce the Bundle Elements in Your Organization:

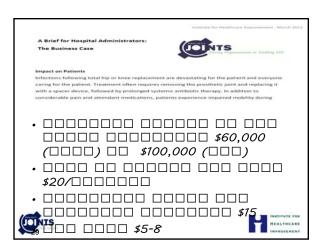












An Annotated Bibliography: Project JOINTS Enhanced

SSI Prevention Bundle for Hip and Knee Arthroplasty

(Sources are listed alphaeotecally in the following 4 categories: Scrub, Soagriepes, Screen, General)

\*\*Described R. Wall M. Bunk K, et al. Chiefresistine-alcohol versus peridone-indine for surgical-size antisepsis. Now England Journal of Medicine, 200(2):62(1):18-26.

The study researchers hypothesized that preoperative skin cleansing with chlorhesidine—alcohol may decrease postoperative infections and is more protective against infection than is povidone-ional. For the study, 848 audits undergoing surgery in six hospitals were randomly assigned preoperative skin preparation with either povidone-ional counts and point (440 subjects) or chlorhesidine-lacohol services. Outcomes included any surgical-size infection within 50 days postoperative and individual types of surgical-sized infection. The ratio of the surgical sized with providone-ional counts and point of the proud treatments aboved to be significantly more effective at preventing both superficial incisional infections and deep incisional infections. In or adaptive organ pages infections. Studies results were seen in the per personal analysis of the patients who remained in the study during the 30-day follow-up period. Adverse events were also millar in the total study groups.

In conclusion, preoperative skin treatment with chlorhesidine-alcohol proved to be more effective at preventing surgicular-size infection after clear-contaminated surgery than povidone-ionine breatment.

\*\*Swesson B. Hedrick T, Metger R, Bonatti H, Pretet TL, Savyer R. Effects of peroperative skin proventions are neglectories on readvention was all surgery and an appropriate skin proventions are neglectories and study groups.

			NIFOSSIAM PITAL					
	Oncode ALLERGE S	mintim & Pro-	op Antikisticy – Total Jaint	Patient Si due				
	Middelov	tudinyi in ili	kesk Medic	mion/Eurolov/Ide Ellicox:				
	Feeds							
	C/R Profes	7-	Autorio (a. Civa; Name Accordigate) Staph aureus screen pre-op a	hr Mynndeg blefer him degelskry og list Ferens bryn derr Omsted New I tottel jojent speli ersts.				
			MRSA or MSSA NEGATIVE					
			MISA or MISA POSITIVE:					
				ntO256M8ID to each nortrilX 5days pre-op				
			Dentacing SMS (Viernal)					
			Distriction 2 GMS IV (regard to					
			MISA POSITIVE:	maximum dos e of 1500mg a over 60 minutes, 1500mg N to Nilses over 90 minutes)				
			□Certozolin 2 6 M6 IV (regard to					
			Uncomprise 13 mg/tg IV to a describence estad to 2250mg N Mala	maximum dos e of 1 300 mg a over 60 minuses, 1500 mg N so hibse over 50 minuses)				
(TTINTS			Re-dusing of antibiotics durin figneter then 2000ml blood loss or 3 [unburs legic] with Cerbasin 25M6	g surgery: .5hour rugely duntion, relate oil patients IV (regulation of seight)	HEALTHCARE			
Wils.					MEALTHCARE IMPROVEMENT			
<u> </u>						_		
*								
Banner Health'	an Count	r Hospital						
Surgical Site Infections	and Pre-C	perative S	ain Preparation for Joint					
			ou Can Do					
better surgery, your body needs to humans have bacteria and germs to dead skin cells and other materials is surgery, these bacteria can sometim	se thoroughly at live on their found on our b set cause an i	ration. These to notices, cluthing, refection. You i	a special scap. This is tecause all activity recreasily help us by algoriting and functions. When you have all treative a special scap from your in 4.0%). This scap must be used after reading this information.	The First Shower Two Case Before Durgery, Take a shower and a	mit your entire books, including your hair and scale			
ductor or nurse called Hibidians (Ch for three showers prior to your surp please call 870-862-6214 to speak	orhesidine Or my. If you he with a mores	uconute solutio ur questions	n 60%). This scap must be used after reading this information.	in the following manner  - Wash your har using normal share had body. Ill ash your face will	soft your entire body, including your hair and scale ion. Make sure you rinse the shampon him your lying regular soap or cleaner.			
CAUTION DO NOT USE HIBIC FACE. AVOID CONTACT WITH	LENS (Chiar YOUR EYES	hesidine Oloco	onain 4.0%) ON YOUR HEAD OR rours, flush eyes thoroughly with	<ul> <li>Using a fresh, clean washclish and glown. This is very important.</li> <li>Rone your body thoroughly. This is</li> </ul>	one. Make sure you mise the phampus from plus your regular scap or clearuse. 10 of the Millians Scap, wash from your gogg is very important. Body arre after this shower.			
CAUTION DO NOT USE HIBEC FACE. AVOID CONTACT WITH WARMS DO NOT USE IF YOU A BRACTIVE INDREDIENTS IN THE MAY RESULT.	RE ALLERGE SOAP, AVO USE YOUR R	E TO CHLORY ID USE IN THE EGULAR SOA	EXEME GLUCONATE OR ANY EGENTAL AREA, AS INRITATION FIN THAT AREA.	Dess in feetily washed differ.     De net use bloom, powders, or one The Second Shower	are after the shower.			
Special Instructions				The Day Before Surgery: Take a shower and so	sh your entire body, including your hair and scalp i			
DO NOT ENAVE THE SUREICAL. The surgical sile. Using a records re- can leave small subs on the skin.	AREAT Your	rurse will use or ir before surger	riggers to remove hair, if needed, at ny can cause infections because it	<ul> <li>Wash your hair using nomial sharp hair and body. Hash your boe will be Using a heat, sean eacholots and</li> </ul>	one. Make sure you mise the sharpoo from your your region scap or cleaner. To of the Holosians Scap, weath from your <u>geets</u> a very inquortant, body sharpool or you of after this shower. area, other this shower.			
The nursing staff at East Morgan Co choosing East Morgan County Hosp this information, please cell 876-6	otal for your to 142-6214 m sy	ergical needs. It peak with a ru	peedy recovery. We thank you for Fyou have questions after reading ree.	Time your body thoroughly. This is     Using a high, dean forest, dry your     Dress in healthy washed clother.	a very important, hody			
					should be used after this shower aris after this shower			
				The Final Shower The Day of Surgery: Repeat the shower in the for	lowing manner			
				her and tooly. Wash your lass with a Using a fresh, steam washeldth and the peols down. This is very impo	your regular step or sleanser. He remarking 1/2 of the Höllichen Step, wash from class.			
				<ul> <li>Ritne pour tonly thoroughly. This is to Using a heat, clean tower, dry your</li> <li>Dress warmly with freship washed a pour ties of developing an inhebition.</li> </ul>	Notes the systems of the shanges from your your register toop or itemans. Step, wash from the meaning 15 of the Minimes Step, wash from rises. I very information. Step steps information of the surgery decreases in. har products, making, or decident after this.			
32				<ul> <li>De tot use intere, preders, crear shower</li> </ul>	s. Nar products, makeup, or decolorant after this			
						_		
		Staphyloco	Keeping you ccus aureus or "Staph" is a althy people. Your skin prot	safe for surgery germ that lives on the skin and in the ects from those germs. When you ha ometimes germs can get into those o	nose			
				ometimes germs can get into those o	uts			
	How do we screen for Stanh? We will swab you nose to see if you have Staph. The test will take 3-4 days for us to know.							
	A positive test does not mean you have an infection. Your surgery will not be canceled or delayed:							
	If my test is positive, what happened?  If you have been a second or the second of the							
	different.  If they used a big tube of Backrohan place enough medicine to cover the tip.							
If you get a signification, pack endough measions to cover me up to the position of the posit								
	If you get makinda tudes, pur name thuse of a obtain swab after put the your control of your note. This has do have full the dot a form that the dot and your note. The who either half in the other side or your note. The your note to get the advertise price of your note. Do there in the morning and one at the indicate of your note. Do the once in the morning and one at the indicate of your note. Do the once in the morning and one at the indicate of your note. Do the once in the morning and one at the indicate of your note. Do the once in the morning and one at the indicate of your note. Do the once in the morning and one at the indicate of your note. Do the once in the morning and one at the indicate of your note. Do the once in the morning and one at the your notes of your notes. The your notes of your notes of your notes of your notes. The your notes of your notes of your notes of your notes. The your notes of your notes of your notes of your notes. The your notes of your notes of your notes of your notes of your notes. The your notes of your notes of your notes of your notes of your notes. The your notes of your notes of your notes of your notes. The your notes of your notes of your notes of your notes. The your notes of your notes of your notes of your notes of your notes. The your notes of your notes of your notes of your notes. The your notes of your notes of your notes of your notes. The your notes of your notes of your notes of your notes of your notes. The your notes of your notes of your notes of your notes of your notes. The your notes of your notes of your notes of your notes of your notes. The your notes of your notes of your notes of your notes of your notes. The your notes of your notes. The your notes of yo							
	night for 5 days.							
				Y AA				
				7				

ANTONIPO SAAM   H O S P 1 T A L   Cannot common success   Decolonization Patient Checklist								
To be admit Apply appropriate Avail count Describe Free Manage Control Contro	Eastwheahdaphrish Ontmark Chet.  The landmissment for the only to the a day. Apply appreciately by it of prescribed entiment from the single was take directly tons one nomit and the whole held may deep the second and the whole held may deep the second and the whole held may deep the second and the second deep throughout the size of the months of the second and the							
DATE	DATE AMNASAL PMNASAL SAGE PREP WIPES BACTROBAN BACTROBAN SAGE PREP WIPES							
Day 1								
Day 2	0xy 2							
Day 3								
Day 4								
Day 5 WHITTOPE FOR HARMON SALES AND								

# **Project JOINTS Calls**

- Call 1: Intro to the Enhanced Surgical Site Infection Bundle
- Call 2: Using an alcohol-containing antiseptic agent for pre- op skin preparation
- Call 3: Chlorhexidine-based preoperative patient showering or use of chlorhexidine wipes
- May 17: Preoperative nasal screening for Staphylococcus aureus carriage and treatment with intranasal mupirocin
- June 28: Learning and Sharing Best Practices
- July 26: Spread and Sustainabilty
- August 30: Patient and Family Centered Care
- September 27: Celebration!!



All calls 3 – 4 PM Eastern Time (2-3 PM Central Time/ 1-2 PM Mountain Time/ 12-1 PM Pacific Time)



# Resources – at your fingertips

- Project JOINTS website all tools (www.ihi.org/projectjoints)
- Project JOINTS listserv online community of 600+ individuals (projectjoints@ls.ihi.org)
- Project JOINTS team direct email to the project team (<u>projectjoints@ihi.org</u>)





	How to sign up	
	Hospital Enrollment for Project JOINTS	
	Withore in Project (2007) (along Operations IN Teolog (200)  To stillad project your helded self-syntheth Project (2007) (2007) (alone, spison complete the form. Please some find only facilities in  Alvance, Collence, Calabas, Maryland CC, Michigas, Manualpe, New York, Organ, Coresson, and Witcomes are edition for participant at the lower.  **Project III  **Projec	-
	Project (OINTS Information  Those (CINT) alone to purse or surplied on whichese in guarant unchanging by and less and required properties by implementing the letteract begand to short. The sum of the page (2005) is imagened relations to from the Ut implement, and queed the Debarred Surgical Monde companied of the ene VIII providers according to the just less warringford in the just less warringford in the just less warringford growing to the page of the page	-
	Access conjugates of these leaves are presented accessed for tiga and earlier accessed against gains.  - This of all and administrating extending an extraction and respectation and the accessed accessed and accessed accessed and accessed accessed and accessed accessed accessed and accessed accessed accessed accessed and accessed acces	
	<ul> <li>Steph named (MICA) and MICA) prevening and use of 1 dept intraviable magnetic and 1 days (OS balling or showing in discussions.</li> <li>The or places of a semantic that we will be offering Commonly Education Units for our self-arms. More default to follow at the start of the</li> </ul>	
	Hospital Information	
100	Go to Project JOINTS Website: Enroll here:	
IONTS	https://docs.google.com/spreadsheet/viewform?formkey=dE9EZUM2U 29rdk9OdlFBS2hxd29xUHc6MQ HEALTHCAME IMPROVEMENT	
	Questions & Discussion	
	Questions & Discussion	
(DINTS	MEALTHCARE	