

A large red circle on the left side of the slide, partially cut off by the edge.

Research for Infection Prevention

- **APIC CHAPTER RESEARCH TOOLKIT:**
 - **Research 101**
 - **Jeanette Harris MS, MSM, MT(ASCP), CIC, FAPIC**
 - [APIC Research Toolkit - APIC](#)
- 
- A series of purple dashed lines in the bottom right corner, forming a curved shape.

First Things First:

- Those who do Infection Prevention do VERY cool, interesting, essential work using **DATA** Every Day!
- We ALL have the basic tools and actually DO research
- We report results in meetings to staff and leadership
- We usually just don't take the final step and SHARE it using publications
- This presentation will give you the step-by-step process to go those last few steps to make that happen!
- ☺

Objectives

- Outline key steps to identify populations for projects
- Define research and why you should be involved
- Review key steps of project design
- *These steps have been modified for Risk-Assessment research
- Using these steps for continuing process improvement
- **AND THE FINAL STEP - publication**

What is Research?

- **Research**
 - Aims to generate **new knowledge** that describes, explains, and predicts through rigorous, systematic methods.
 - Research cannot prove things; rather, research supports the probability of something. Once a lot of research is completed on a topic
- **Evidence Based Practice (EBP)**
 - Uses findings from all that research to generate best methods for providing patient care.
 - Both research and EBP ultimately guide practice so we don't have to rely on trial and error, "old wives' tales," and intuition.

Why Research Matters



RESEARCH
FORMALIZES THIS
PROCESS TO CREATE
GENERALIZABLE
KNOWLEDGE AND
**ADVANCE THE
FIELD.**



ANYONE CAN DO
RESEARCH!



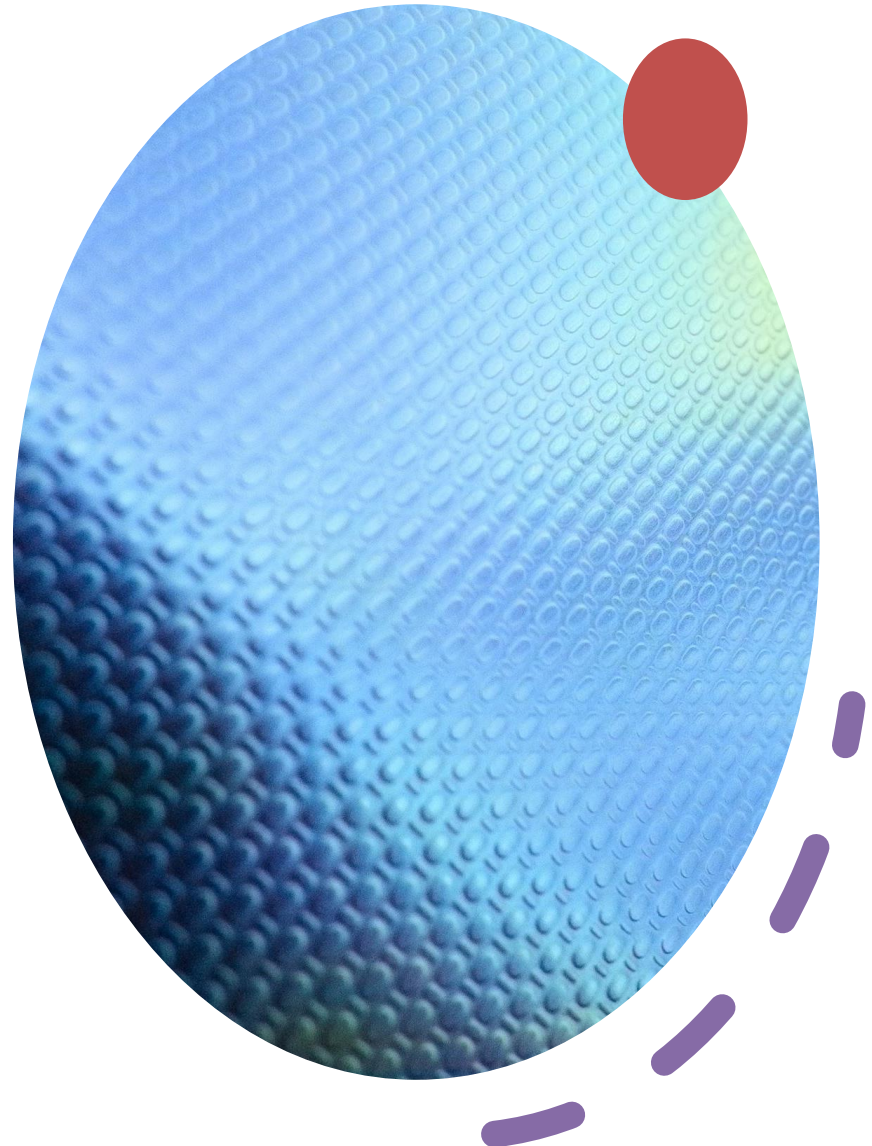
DON'T BE AFRAID OR
OVERWHELMED TO
DO IT.



ALTHOUGH
SEEMINGLY A
DAUNTING TASK,
RESEARCH CAN BE
TACKLED IN SMALL
STEPS.



WHEN THE
OPPORTUNITY
ARISES FOR YOU TO
DO RESEARCH, USE
THIS TO HELP YOU
SET YOUR PROJECT
UP FOR SUCCESS BY
ENSURING IT'S A
STUDY OF STRENGTH



Planning is Important!

- 6 Step Program
 - Pick your Topic/Question
 - Pick your team
 - Literature Search
 - Project Design
 - Data
 - Report/Publish



Step 1: Topic (The Research Question)

- This is just a question you want to answer!

- Things to ponder about your research question
 - What do you want to know?
 - How are you going to best answer your question?
 - What are the interesting ideas about the data?
 - What data are needed to answer your question?
 - Do you understand the data?
 - Do the data answer the question?
 - How do you analyze the data?
 - Can you answer the question?

Characteristics of a Research Question

- **Relevant:** Is the question an issue that can be investigated by research?
 - How does this research contribute to the field?
- **Measurable:** Can you actually collect the proper data to answer your question?
- **Specific:** Is the question investigable?
 - Can you actually research it?
- **Clear and simple:** Can readers of the question understand what you're hoping to find out?
- **Interesting:** Are readers interested?
 - Is the question substantial?
- **Answerable:** Can you provide an answer to your question?

Finally, it is a question not a statement

Question Template: "The purpose of this study is to investigate/determine/establish the relationship between _____ and _____ and why _____"

Use simple and succinct language.

- a. What is the relationship between _____ and _____?
- b. What factors affect _____?
- c. How do the effects of _____ influence _____?
- d. How does _____ relate to _____?
- e. Why is the _____ an issue for _____?
- f. Does _____ mean that _____?
- g. How many _____ are still _____
over _____ [period of time]?

Broad topic:

Chickens cross roads. Why?

Purpose statement:

The purpose of this study is to determine why chickens cross roads.

Q v1: Why do chickens cross roads?

This is pretty broad and is hard to measure. Do you conduct chicken surveys? Can chickens even fill out surveys? (Perhaps not very well.)

Q v2: How many chickens crossed the road in front of your house in January?

Too specific, and it's hard to count chickens if you're not at home. Could you even see them if they cross at night?

Q v3: What are some of the factors that occurred in Washington state in January and February that would cause chickens to cross rural roads?

Specific, observable, measurable, investigable and answers the "why." Fulfills the purpose statement.

Let's try again, this time asking a question related to infection prevention:

Broad topic:

What can we do to reduce surgical site infections (SSIs)?

Purpose statement:

The purpose of this study is to determine how to reduce surgical site infections (SSIs).

Q v1: Why do we have SSIs?

Wow, broad. Can we focus on one type of surgery? Let's focus on the surgery with the highest surgical infection rates (SIRs).

Q v2: What were the causes of colon SSIs in the last quarter?

Better, but think about measurements, observation, and a goal.

Q v3: In the last year, we had an SIR for colon surgery >1.0 . What were the determining factors of these infections? What were the extrinsic factors (patient variables) and what were the intrinsic factors (healthcare variables) that contributed to these SSIs?

Much better! You have a specific time frame and a measurable quantity for both types of factors contributing to SSIs.

Step 2: Team – Bring in Friends

It's corny but it's true: Teamwork makes the dream work. The PI is like a captain of the ship—use your motivation and enthusiasm to lead the group toward one common purpose. Have the confidence to identify yourself as the PI or research team member

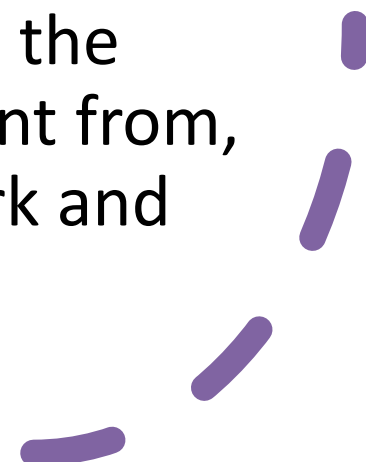
- Diversity
 - Buy-in and help from different groups
 - CARROTS
- YOU are the Principal Investigator (PI)
 - Know and say it out loud that you can do it!
- Management
 - YOU have Responsibilities

Step 3: Literature Search

- Specific objectives of a literature review are to: Summarize current knowledge
- Generate and refine your own research ideas
- Provide a critical review that demonstrates:
 - Awareness of the current state of knowledge in the subject area (description skills)
 - A synthesis of resources showing their strengths and limitations, omissions, and biases (critical skills)
 - How the identified and reviewed research fits into this wider context (analytical skills)



Lit Search: How to Start

1. Goal: find out what is already known about a specific topic
 2. Why is this important?
 1. Knowledge doesn't exist in a vacuum
 2. Your work and your findings will be meaningful to the extent that they're the same as, or different from, other people's work and findings
- 

Access to Content

- Internet – but be careful!
- MEDLINE
- CINAHL
- GOODLE SCHOLAR
- OVID
- EBSCOHOST
- ELSEVIER
- If you are in an institution with a medical library, always seek professional assistance from your local/institutional librarian or informatician first

Examples of databases used in literature review searches

Database	Description
National Guideline Clearinghouse (www.guideline.gov)	Summaries of best practice guidelines
DynaMed (www.dynamed.com)	Synthesis of the most recent medical information into evidence-based recommendations
Cochrane Library (www.cochranelibrary.com)	Database of Cochrane systematic reviews, plus quality assessments of other systematic reviews and database of randomized controlled trials
PubMed (www.ncbi.nlm.nih.gov/pubmed)	Free resource: Citations from MEDLINE (medical literature), life sciences publications, and online books
OVID MEDLINE (www.wolterskluwer.com/en/solutions/ovid)	Database of medical journal publications
EBSCO CINAHL (www.ebsco.com/products/research-databases/cinahl-database)	Database of nursing and allied health publications

Other resources

- National Library of Medicine: <https://www.nlm.nih.gov>
- PubMed online training: <https://learn.nlm.nih.gov/documentation/training-packets/T0042010P>
- Charles Sturt University. Literature review: developing a search strategy:
<https://libguides.csu.edu.au/c.php?g=476545&p=4949988>

Research Design for IP - QI

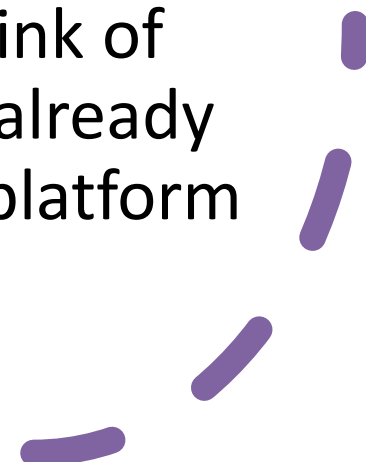
- QI is used to find effective and quicker ways to improve outcomes
- Unlike clinical research, QI initiatives do not attempt to “control” real-life variables
- QI projects measure outcomes before, during, and after an intervention
- Popular process improvement techniques include Lean, Six Sigma, and plan-do-study-act (PDSA) cycles.

Application

- We can do QI projects and research!
- QI projects are generally more local and self-evaluating than research, with the benefit of quickly fixing a specific problem
- With analytical (observational and experimental) research, we can test hypotheses and generate new knowledge that contributes to our professional field
- Even descriptive research, such as writing a case study, is valuable by describing a phenomenon and adding to a growing body of published work



Data and Data Management

- Description of the project
 - Description of the data
 - Data storage
 - Legal/Ethical issues
 - Assigning data management (this is probably YOU) 😊
 - For each variable, think of your analysis. If you already know the statistical platform (e.g., Excel, SAS)
- 

IRB or NOT?

- Before you start any research/QI/EBP
 - Federal regs require projects involving human subjects to be reviewed
 - IF you want to publish in a peer reviewed journal it might be worth the hoop jumping
- NOT required for abstract submission (exemption)
 - *However – once you have a poster and.....: “You should submit this for publication in AJIC or the AORN Journal”
- Address this early! Tip: find and make friends with IRB Rep or coordinator and ask for help! Remember – their job is to facilitate not inhibit

Exempt vs Full IRB Review

- Some examples of exempt research are:
 - Anonymous surveys or interviews
 - Passive observation of public behavior without collection of identifiers
 - Retrospective chart reviews
 - Analyses of discarded pathological specimens without patient identifiers
- IRB review may seem daunting but, as stated earlier, most IP-led research projects will be exempt. You can do it!

Statistic Analysis Example:

- Q: Does daily chlorhexidine gluconate (CHG) wipes reduce the number of central line–associated bloodstream infections (CLABSI)
 - You trial daily CHG wipe use on one unit for three months before going hospital-wide
- There are multiple ways of measuring and analyzing your data.
 - You can show changes in the trial unit's pre- and postimplementation CLABSI rate over time
 - The infection rate can also be analyzed using statistical process control (SPC) methods within a control chart.
 - You can measure statistical significance by performing a t test of the average (mean) CLABSI rate pre- and post-CHG implementation.
 - You can also potentially measure success without the use of CLABSI rates through a Chi-square analysis
 - If you include a similar patient population/unit with central line days that were not part of the intervention, you can analyze the presence of CLABSI between patients who did and did not receive the intervention
 - Note that this is a type of exploratory analysis, and more analysis is needed to ensure that patient acuity, adherence to other CLABSI prevention bundles, and hand hygiene compliance are not potential confounders

DID YOU KNOW.....

- NHSN has a built-in p-value calculator????
*WHAAAAAAAAAAT??
- In “Analysis” pick “Statistics Calculator”

 Statistics Calculator



- [Compare Two Proportions](#)
- [Compare Two Incidence Density Rates](#)
- [Compare Single Proportion to a Benchmark](#)

The options below can be applied to the following standardized ratios: standardized infection ratios (SIRs), standardized utilization ratios (SURs), standardized antimicrobial administration ratios (SAARs), pathogen-specific standardized infection ratios (pSIRs), and standardized resistant infection ratios (SRIRs).

- [Compare Single Standardized Ratio \(for example, SIR\) to Nominal Value](#)
- [Compare Single Standardized Ratio \(for example, SIR\) to 1](#)
- [Compare Two Standardized Ratios \(for example, SIRs\)](#)

Statistic Resources

APIC

- APIC Research Committee: <https://apic.org/Professional-Practice/Research>
- APIC Research Webinar Series: <https://apic.org/course/research-webinar-series>
- APIC Text: Descriptive Statistics: https://text.apic.org/toc/epidemiology-surveillance-performance-and-patient-safety-measures/descriptive-statistics#book_section_437
- APIC Education: Effectively Using Data course: <https://apic.org/course/effectively-using-data>
- APIC Education: Tech Tools, Basics of Microsoft Excel course: <https://apic.org/course/tech-tools-basics-of-microsoft-excel>
- APIC Education: Basic Statistics for Infection Preventionists (slide presentation): <https://apic.org/course/basic-statistics-for-infection-preventionists>
- APIC Additional Resource: Using and Reporting Data Objectives (slide presentation): https://apic.org/Resource/TinyMceFileManager/Academy/EPI_101_resources/Using_and_Reporting_Data.pdf

National Healthcare Safety Network

- Basic Statistics for NHSN Analysis (video presentation): https://www.youtube.com/watch?v=06Wr0_SBjwY
- NHSN Patient Safety Analysis Quick Reference Guides: <https://www.cdc.gov/nhsn/ps-analysis-resources/reference-guides.html>

Other resources

- Healthcentric Advisors: Calculations of Infection Rates: https://healthcentricadvisors.org/wp-content/uploads/2017/03/Cal_Inf_Rates.pdf
- UCLA Institute for Digital Research & Education: Choosing the Correct Statistical Test with Programming in SAS, STATA, SPSS, and R: <https://stats.idre.ucla.edu/other/mult-pkg/whatstat>

Writing Up Your Research – The Final Step

Disseminate through abstracts, posters, and publications.

- WHY???
- To enhance the knowledge base of our profession
- To stimulate professional critical thinking
- To challenge views
- To reach a larger audience
- To advance your career
 - publishing and public presentations may improve your career prospects, establish your reputation, and raise the profile of your organization (FAPIC/AL-CIP goals)
 - To meet recertification criteria for the Certification in Infection Prevention and Control (CIC) credential through CBI

Abstracts, Posters, and Publications

- Start small with an abstract (APIC - 300 words)
- Develop an abstract for submission to an annual professional meeting, such as the APIC Annual Conference. (or AORN or ASPAN or ??)
- Abstract Key elements
 - Title
 - Background
 - Methodology
 - Results
 - Discussion/Implications

**FYI...APIC Abstract
Submission OPENS
around October –
closes in December
YOU HAVE TIME!**

Whoop Whoop!!! ACCEPTED!! Next UP: Poster or Oral Presentation

The POSTER! And Maybe Oral Presentation

Flash No More: An Improvement Project to Eliminate Immediate Use Steam Sterilization



Jeanette Harris, Stacey Donovan, Lisa Schmiedeskamp, Natalie McBath
Evergreen Healthcare Surgical Services



Conclusion:

IUSS rate decrease of 84.9% (p-value <0.001).

This IUSS rate reduction is dramatic and sustained for more than 2 years and continues to drop.

*Clearly, the combined forces of OR leadership, dedicated OR staff, Central Supply and Infection Prevention is the catalyst for successful IUSS reduction

BACKGROUND

The Centers for Disease Control and Prevention (CDC) and the Association of Operating Room Nurses (AORN) guidelines emphasize the importance of restricting IUSS to only following standardized sterilization processes to ensure patient safety

METHODS

The established target for IUSS is <3.0%. IUSS Rates prior to intervention were >3.0%.

INTERVENTION #1 Q2 2020: Monthly reporting of IUSS Data in the SSI Committee with evaluation of cause

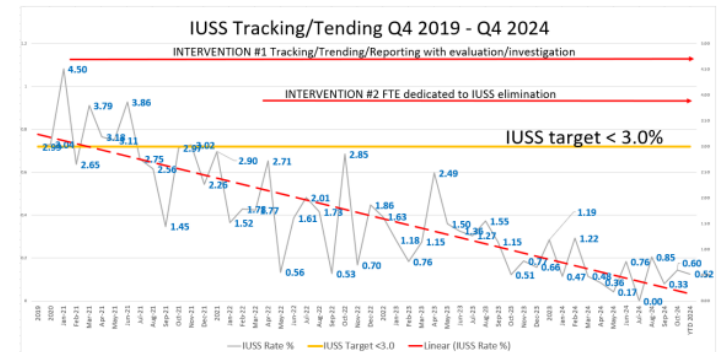
INTERVENTION #2 Q4 2021: Creation of a new full-time position to monitor instrument coordination, purchase needs, and scheduling to Eliminate IUSS

RESULTS

Systematic examination of surgical practice needs, instrument purchasing needs, and scheduling changes to eliminate back-to-back same surgery, budget concerns, and documentation of any IUSS requests. Tracking and trending of IUSS rates reported at the monthly SSI Committee Meeting. Prior to these interventions, the IUSS rate in 2020-2021 was over target at 3.04%. Post #1 intervention in 2022 rate = 1.68%, 1.19% in 2023. Q4 2024 rate = 0.52%



Algorithm for IUSS Evaluation/Elimination



Kinder, Gentler Presurgical Skin Prep

Susanne Parker, MSN,RN,CSN
Jeanette Harris, MS,MSM,MT (ASCP),CIC,FAPIC
Evergreen Healthcare, Kirkland, WA

Introduction and Background

Decontamination of the skin with an antiseptic agent is standard/best practice ⁷ before any trans-cutaneous invasive procedure, but the antiseptic agent of choice to best reduce the risk of surgical site infections (SSI) remains open ⁵.

Although numerous studies have shown that using isopropyl alcohol, and benzalkonium chloride as the primary antiseptic agents is very effective in reducing risk of SSI ^{8,10,11}, its use has significant negative side effects. One of the most common negative side effects of such skin preparation has been a significant incidence of patient skin rash/reactions, resulting discomfort and possible need for further medical intervention.

Evergreen Healthcare located in Kirkland, WA, experienced a significant decrease in SSI's after adopting CHG wipes prep in 2019. However, accompanied with this positive decrease in SSI was a significant incidence of serious skin reactions often requiring further medical intervention and resulting in patient discomfort and pain.

The incidence of adverse skin reactions became so numerous that surgeons were requesting that patients not be treated with CHG wipes preoperatively.

Description of Population

Study participants included all outpatient surgical patients for a continuous 2 months and all surgical patient (including inpatient) for the final 3rd month.

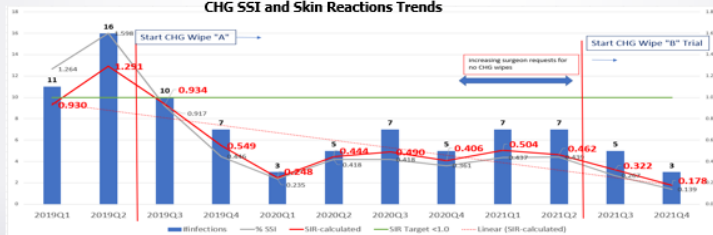
Interventional Group- use of a presurgical skin preparation using 2% Chlorhexidine Gluconate as the primary disinfectant agent along with skin humectants and emollients

Control Group- continued use of presurgical skin preparations containing the widely used disinfectants isopropyl alcohol, and benzalkonium chloride

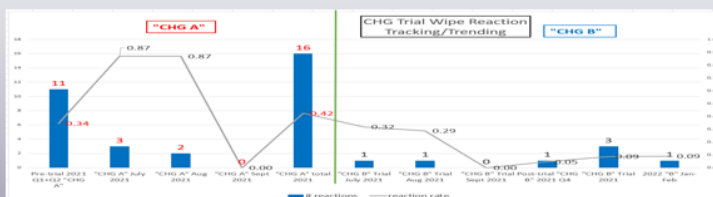
Improvements/Outcomes

Primary Disinfectant	isopropyl alcohol, and benzalkonium chloride	2% Chlorhexidine Gluconate
# Cases	989	829
Adverse Skin reactions	11	3
Required Inpatient Txt	3	0
Required ED Txt	2	0
Increase in Infection	Control Group	0

CHG SSI and Skin Reactions Trends



Before and After CHG Skin Reactions Trend



Scope of the Issue

Are there other CHG skin prep products that do not use isopropyl alcohol, and benzalkonium chloride as the primary disinfecting agent which will adequately cleanse and reduce biobload on skin areas while decreasing and/or eliminate adverse skin reactions in patients?

- Population**- Surgical patients at Evergreen Medical Center, Kirkland, WA
- Intervention/Interest**- Alternatives to Skin cleansers/antiseptics are routinely used as part of presurgical preparation
- Comparison**- Alternatives to isopropyl alcohol being primary disinfectant agent in presurgical skin prep formulations without increase in SSI
- Outcome**- statistically significant decrease in adverse skin reactions as a result of presurgical skin preparation
- Time Period**- June 2021-present
- Data Collection**- Literature review of studies and meta-analysis

Collaborative Team

The collaborative included myself, PACU educator- Jeanette Harris, MS,MSM,MT (ASCP),CIC,FAPIC, all staff RNs in all hospital PACU's, floor staff nurses and infection control personnel.

REFERENCES





Data, Standardized Processes and Interdisciplinary Collaboration: A Quality Improvement Project (QIP) to Reduce Surgical Site Infection following Cesarean Delivery

J. Harris¹ MS, MSM, MT(ASCP), CIC, FAPIC; M. Spitzer² MBA, RN, CWOCC, CFCN and J.M. Murdoch² Ph.D.

¹Department of Infection Prevention, EvergreenHealth, Kirkland, Washington, US. ²Global Clinical Strategy, Global Clinical and Medical Affairs, UK.



INTRODUCTION/BACKGROUND

Caesarean delivery (CD) enables childbirth through an abdominal incision^{1,2}. CD is the most common surgery performed in the US, with >1.2 million procedures performed per year, accounting for ~32% of all deliveries^{3,4}. US State differences in CD rates occur and a recent report highlighted the range being 23.4% to 38.5%⁵. The CD rate in Washington State (WA), the location of this QIP, is 29%⁶. Due to the high incidence of this procedure, it is important to consider the risks associated with this potentially lifesaving surgery. The most common maternal complications are bleeding and surgical site infection (SSI)⁷. This WA hospital performs a high volume of CD and serves a high-risk, diverse patient population and treats all patient, regardless of health insurance status. Three items were imperative to the success of this QI project: data analysis and sharing, interdisciplinary collaboration, and standardized processes.

OBJECTIVES/AIMS

The purpose of this analysis is to evaluate the process and subsequent outcomes of a quality improvement project (QIP) aimed to reduce surgical site infections (SSI) following CD in one 318-bed public district hospital in Washington State.

METHODS

An interdisciplinary council was created to drive regular data analysis and sharing, interdisciplinary collaboration, and standardized processes to reduce SSI following CD. The standardized infection ratio (SIR), a summary measure used to track hospital-acquired infections at a national, state, or local level over time, was used⁸. Bundle components included: pre- and post-surgical education and access to follow up, peri- and intra-operative practice changes, and a risk-stratification tool (Figure 1) for post-operative dressing selection (Figure 2).

RESULTS

The QIP bundle was initiated in April 2022. After use was established for 6 months, the SIR was evaluated in the fourth quarter of 2022. The expected SIR for the hospital was 2.64, and the actual SIR measured just 0.38. In 2022, which included 3 months pre-bundle and 9 months post-bundle, the expected SIR was 10.57, with an actual SIR of just 0.66 for the full year. In 2023, the expected SIR was 11.10, with an actual SIR of 0.27; from January - May 2024 the expected SIR was 2.6 and the actual SIR was 0 (Figure 3). 98% of patients that underwent CD received the full bundle.

Figure 1: Risk stratification tool used to determine risk category and appropriate postoperative dressing. BMI = body mass index; chorio = chorioamnionitis; GDM = gestational diabetes mellitus; ROM = rupture of membranes or amniorrhexis.

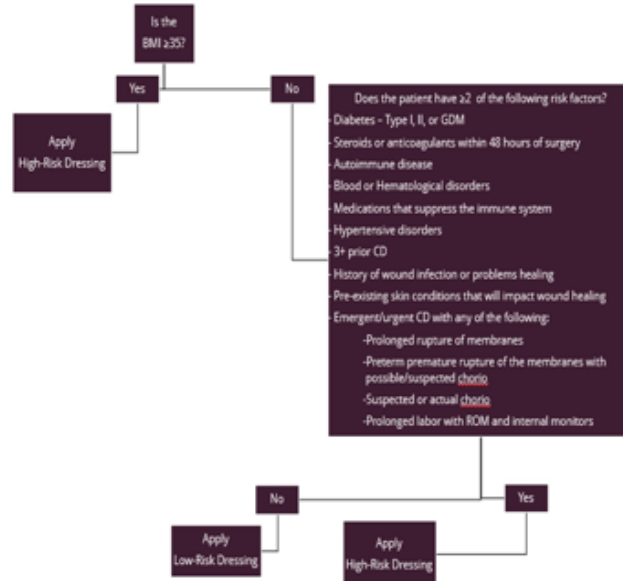


Figure 2: Dressing selection options for patients deemed low- or high-risk via risk stratification tool

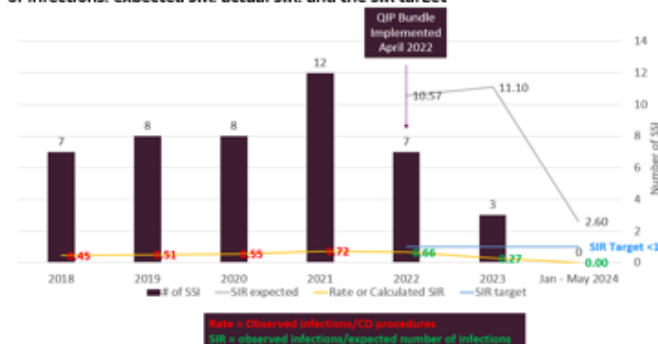


Low-Risk Dressing Selection:
A waterproof, bacteria-proof dressing with see-through absorbent pad (OPSITE™ POST-OP VISIBLE, Smith and Nephew, Hull, UK)



High-Risk Dressing Selection:
Single-use Negative Pressure Wound Therapy (PICO™ Single Use Negative Pressure Wound Therapy System, Smith and Nephew, Hull, UK)

Figure 3 title: CD SSI data from 2018 – September 2023, indicating the actual number of infections, expected SIR, actual SIR, and the SIR target



CONCLUSIONS

The ongoing analysis and sharing of data, the implementation of standardized processes, and interdisciplinary collaboration were imperative to the success of this hospital's QIP to reduce SSI for patients undergoing CD. The hospital has achieved a SIR for CD well below the national and Washington State SIR; in addition to the SIR goal set forth by the SSI council of <1.

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CONTACT INFORMATION

Julie, M Murdoch Ph.D.
Global Clinical & Medical Affairs
Smith and Nephew
Email: julie.murdoch@smith-nephew.com
Tel: +44(0)7740531720

The WHOLE Patient Focus: Bundled Strategies for Total Joint Infection Reduction

Jeanette Harris MS, MSM, MT(ASCP), CIC, FAPIC

Introduction

Total joint surgery, also known as arthroplasty, is a surgical procedure performed to replace damaged or diseased joints with artificial implants. It is primarily performed on hips and knees. Approximately 1.5 million total joint arthroplasty surgeries (TJA) are performed annually in the United States. Due to the volume of this procedure and catastrophic outcomes, reducing infections in TJA patients is essential for optimizing patient outcomes, controlling healthcare costs, and ensuring patient safety. The purpose of this analysis is to evaluate the process and outcomes of a quality improvement project (QIP) aimed to reduce surgical site infections (SSI) following TJA in one 355-bed public district hospital.

Methodology

An interdisciplinary program was created to drive regular data analysis and sharing, interdisciplinary collaboration, and standardized processes to reduce SSI following TJA. The standardized infection ratio (SIR), a summary measure used to track hospital-associated infections at a national, state, or local level over time, was used. Bundle components included, pre-and post-surgical education, and access to follow up, peri- and intraoperative practice changes, and a risk-stratification tool for post-operative dressing selection.

Initial Bundle

Shower or bathe (full body) with soap night before

Prophylactic antibiotics within 1hr of incision

Alcohol-based skin prep

Glycemic control (target < 200mg/dL)

Normothermia

Increased fraction of O2 during surgery

Intervention Bundle Components

Skin incisional protection
• Skin adhesive in addition to sutures or staples
• Silver or CHG dressing

Low negative pressure sealed dressing for high-risk procedures/patients

Protect the wound for 7 days post op

Keep edges of the wound together

Manage drainage

Do NOT "peek" under the dressing without changing the dressing (no tape)

Glucose management post op

Nutrition support post op

NO SMOKING!

Patient education for wound care, aseptic wound care, in the language they use

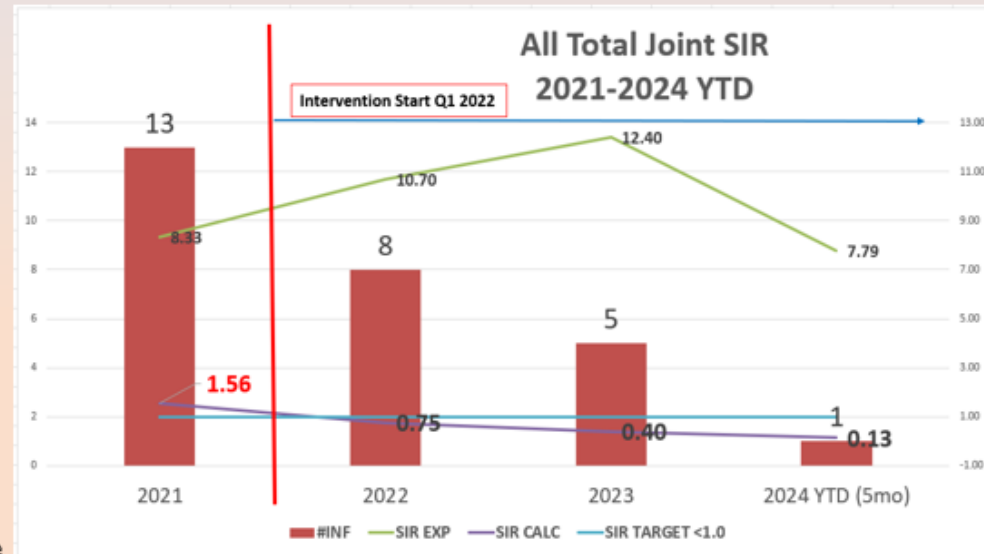
Post-discharge support for and S&S of infection, education for need to maintain oral health

Post-op clinic visits reinforcement

Phone number to call for questions

Bring them into office to "get eyeballs on them early"

Results



The bundle was initiated in January of 2022. TJA SIR was evaluated in the 4th quarter of 2022. The expected SIR for the hospital for both hip and knee arthroplasty was 10.7 and the actual SIR measured just 0.75 for the full year. The previous year the actual SIR was 1.56, over the target of 1.0. The 2023 expected SIR was 12.40, with an actual SIR of 0.40. Through the first five months of 2024 the expected SIR is 3.30 with an actual SIR of 0.30. **The percentage reduction of SIR from 2021 to 2023 is 74.4%.(p-value <0.001)** 100% of patients that underwent TJA received the full bundle.

Conclusion

Through ongoing analysis and sharing of data, the implementation of standard processes, and interdisciplinary collaborations were essential to the success of this hospital's QIP to reduce SSI for patients undergoing TJA. The hospital has achieved an SIR reduction for TJA well below the national and state SIR. In addition, to the QIP program SIR goal of <1.0.

The Ultimate Goal – Peer Reviewed Publication

- This is the “Gold-Standard” it’s not easy, but it IS rewarding
- Steps: (There’s more than AJIC out there)
 - A. Choose a journal that might fit
 - A. Readership (does your topic fit?)
 - B. Review the author guidelines (this will improve your odds)
 - C. Read your picked journal – format
- JUST WRITE! And WRITE SOME MORE – why, how, what, why is this important?

IMRaD Format

- Introduction
- Methods
- Results
- Discussion
- And also include an abstract AND references

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Using a Multi-Faceted Active Change Process and Infection Prevention to Reduce Post Op C-Section Infections

Jeanette Harris, MS, MSM, BS, MT(ASCP), CIC · Mrs. Evelyn Hickson, RN, MSN, CNS, WCC

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A Journey to Zero: Reduction of Post-Operative Cesarean Surgical Site Infections over a Five-Year Period

Evelyn Hickson,¹ Jeanette Harris,² and David Brett³

Abstract

Background: Surgical site infections (SSI) are a substantial concern for cesarean deliveries in which a surgical site complication is most unwelcome for a mother with a new infant. Steps taken pre- and post-operatively to reduce the number of complications may be of substantial benefit clinically, economically, and psychologically.

Methods: A risk-based approach to incision management was developed and implemented for all cesarean deliveries at our institution. A number of incremental interventions for low-risk and high-risk patients including pre-operative skin preparations, standardized pre- and post-operative protocols, post-operative nanocrystalline silver antimicrobial barrier dressings, and incisional negative pressure wound therapy (NPWT) were implemented sequentially over a 5-y period. A systematic clinical chart review of 4,942 patients spanning all cesarean deliveries between 2007–2012 was performed to determine what effects the interventions had on the rate of SSI for cesarean deliveries.

Results: The percentage of SSI was reduced from 2.13% (2007) to 0.10% (2012) ($p < 0.0001$). There were no substantial changes in the patient population risk factors over this time. As a result of the changes in incision management practice, a total of 92 cesarean post-operative SSIs were avoided: A total cost saving of nearly \$5,000,000.

Conclusion: Applying a clinical algorithm for assessing the risk of surgical site complication and making recommendations on pre-operative and post-operative incision management can result in a substantial and sustainable reduction in cesarean SSI.

Research is ALL about Small Steps but it's Relentless

- You tackled your research project in small steps.
- Now, do the same thing with writing your paper
 - Again, no effort is wasted, as many of the elements included in a journal article can be found in your research proposal!
 - I usually start by writing the methods section first (I KNOW that well – easier to write)
 - I write the introduction last, or you could assign members of your team to tackle different sections
 - Just keep writing and keep editing until you have a final product you are proud of
 - Lastly, remember that help is available to you from the APIC Research Committee members!

Don't Be Discouraged

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Featured Article

Success of a Colorectal Surgical Site Infection Prevention Bundle in a Multihospital System

Jeanette Harris MS, MSM, BS, MT(ASCP), CIC, FAPIC

First published: 30 April 2018 | <https://doi.org/10.1002/aorn.12124> | Citations: 7

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Abstract

Surgical site infections, readmissions, and extended hospital stays are risks for patients undergoing colon surgeries. These procedures are often urgent, and patients may have multiple comorbidities. Preoperative and postoperative steps to reduce the number of complications provide substantial benefits clinically, economically, and psychologically. We used a multidisciplinary, collaborative approach to identify best practices when developing and implementing a standardized approach to the management of patients undergoing elective colon surgery. Interventions included nutrition supplements and preoperative and postoperative protocols. Our management project showed a 74.6% reduction in readmissions, a 22.73% reduction in length of stay, an 85% reduction in colon surgical site infections measured by incidence (84.5% reduction) and standard infection ratio (54.55% reduction), and 95% compliance with the use of both order sets during an 18-month period. Applying standardized order sets for assessing and addressing patient comorbidities before colorectal surgery can result in a substantial and sustainable reduction in complications.

Additional Resources

- Bennett P. How to write a paper. Int Emerg Nurs. 2010;18:226-230. doi:10.1016/j.ienj.2010.04.003
- Elsevier. Graphical abstracts. Accessed October 3, 2021. <https://www.elsevier.com/authors/journalauthors/graphical-abstract>
- Gelling L. Stages in the research process. Nurs Standard. 2015;29(27):44-49. doi:10.7748/ns.29.27.44.e8745
- Lewallen LP, Crane PB. Choosing a publication venue. J Prof Nurs. 2010;26(4):250-254.

Key Takeaways:

- Publishing your work is beneficial to you, your organization, and the overall field of infection prevention and control.
- Use your research proposal to help craft your abstract or publication.
- When writing up your work for publication, divide the paper into smaller portions to make this task more manageable and less overwhelming.

Questions!!! **Whew!

- I'm tired!
- *And I wasn't even writing