

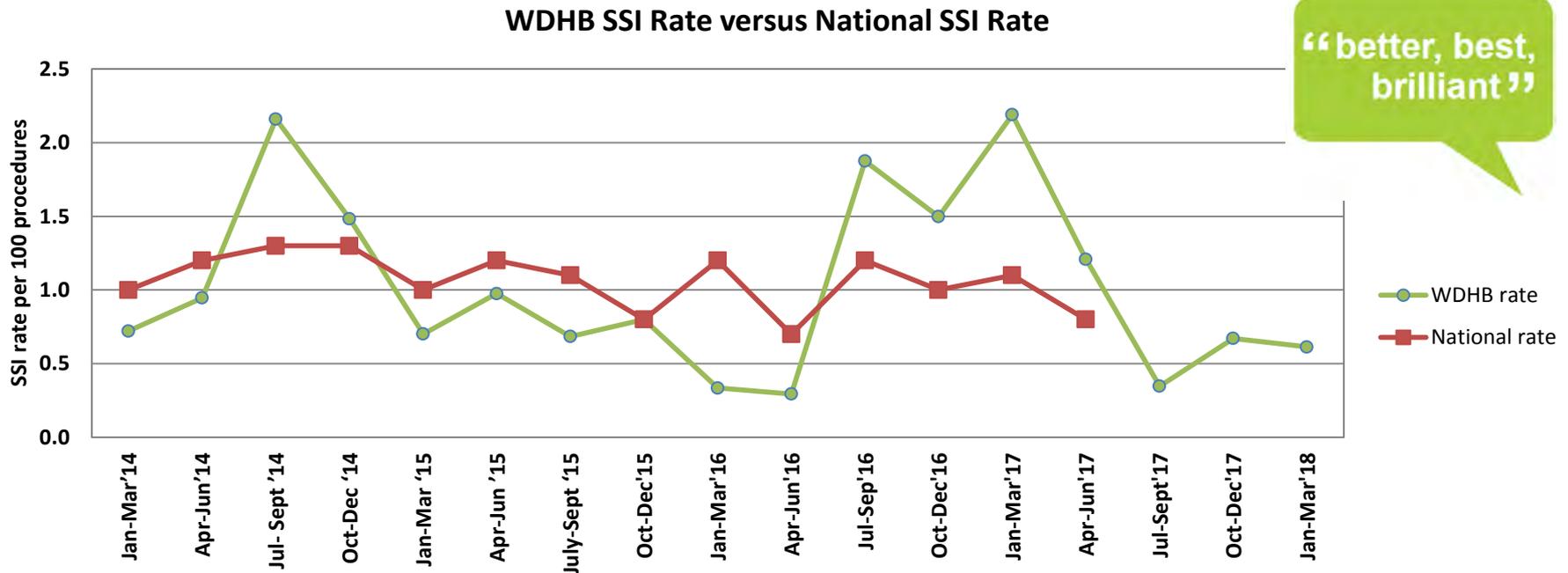
Innovative patient-centred approach to prevent surgical site infection in orthopaedic arthroplasty surgery

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Background, rationale and aim

- Surgical site infection (SSI) after arthroplasty is a devastating and costly complication
- Since Jan 2014 Waitemata DHB has seen 50 SSIs (1%)
- Each deep SSI costs an average \$40,000NZD with a >40 day excess length of stay¹
- Our rate has not improved despite excellent adherence to a nationwide improvement programme commenced in 2013 48% of our deep SSIs are caused by *Staphylococcus aureus* – significantly greater than the national average of 30%
- We have therefore implemented a trial of *Staphylococcus aureus* decolonisation which rolled out in November 2017 and are currently the lead orthopaedic pilot site in a national Health Quality and Safety Commission Staphylococcal decolonisation project in cardiac and orthopaedic surgery
- **Our aim: To reduce orthopaedic surgical site infections by 20% by July 2019**



Why is this important to our patients?

Surgical site infections cause a massive impact on patients and their whanua. Surgical site infections can impact on a patient and their whanua in all facets of their life, including:

- Emotional
- Spiritual
- Financial
- Employment
- Relationships
- Chronic pain
- Life long antibiotic use
- Permanent physical disability
- Housing

We listened to our patients. We gained funding from the Waitemata DHB patient experience department and filmed Hazel's story. Hazel told us about the devastating impact of surgical site infection on her life.



How did we engage with our patients?

- Helping our patients understand their participation is vital:
 - Education given to the patients by the pre-admit orthopaedic nurses.
 - Development of a patient information pamphlet and improving this after receiving patient feedback
- Making patient participation affordable:
 - The orthopaedic department co-funded this program reducing the patient's personal cost to \$5

“with
compassion”

“everyone
matters”

What did we do?



Patients are recommended to apply mupirocin ointment twice daily for 3 days before surgery



Patients are recommended to wash their whole body with chlorhexidine sponges once daily for 3 days before surgery

We provide our patients with a information pamphlet to guide them through the process



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Preparing your skin before surgery

Introduction

Before surgery you need to prepare your skin to reduce the risk infection. You have been given a prescription for a tube of antibiotic cream and three antiseptic sponges. You will need to fill the prescription at North Shore Hospital Outpatient Pharmacy. This will not be available at your community pharmacy. Please read the following instructions on how to use the ointment and sponges carefully. If you have any questions call:

- Pre-Admit Nurse at Elective Surgery Centre Ph: 09 443 9072
- Pre-Admit Nurse at North Shore Hospital Ph: 09 486 8920 extension 46760

⚠ Please start these steps 2 days before surgery

⚠ Please tell the Pre-Admit Nurse if you have any allergies to Chlorhexidine or antibiotic creams

Bactroban (Mupirocin) Ointment Instructions

You must start using this TWO days before your surgery:

1. Wash your hands thoroughly with soap and water.
2. Squeeze a small amount of ointment (pea size) onto a cotton bud or your finger.
3. Apply to the inside surface of both nostrils.
4. Close your nostrils by pressing the sides of your nose together and then releasing them.
5. Do this over and over again for 1 minute. This will help spread the antibiotic throughout the inside of your nostrils.
6. Repeat this process morning and night (including the morning of surgery), starting from two days before your surgery. This means you will use the ointment a total of 5 times before your surgery.
7. Please bring your ointment with you into hospital. The ointment will continue to be used in hospital for the first 3 days of your admission.



Chlorhexidine Wash Instructions

You have been provided with 3 sponges. Each sponge should only be used once. You must start using these TWO days before your surgery. You need to wash with the sponges a total of 3 times before your surgery. Washing should happen:

1. Daily for two days before your surgery (morning OR night).
2. Also at home the morning of your day of surgery.

Please follow the manufacturer's instruction on the sponge packet on how to use the sponge.

1. Please get wet with water in the shower
2. Wash your whole body and hair with the sponge
3. Allow the chlorhexidine to sit on your skin for 1 minute before washing it off with water in the shower

How did we do?

- Results from the trial from 1st Nov 2017 to 9th March 2018:
 - Total number of patients 157
 - Compliance with decolonisation 95%
 - Ongoing SSI surveillance as part of the national programme: only one confirmed SSI (superficial) case since implementation
- Extremely positive feedback from patients and surgeons – planned expansion of the programme to spinal and general orthopaedic surgery in 2018

Why have we been so successful?

- Leadership, expert guidance and co-operation between Infectious Disease physicians, Infection Prevention and Control, ID pharmacists and the Orthopaedic service
- Feedback at a national level from the HQSC
- Education and promotion to our patients by the pre-admit orthopaedic nurses. Patients are made aware of the importance of their participation to protect their health.

References

Gow N, McGuinness C, Morris A, McLellan A, Hardy A, Munro J, Roberts S. Excess cost associated with primary hip and knee joint arthroplasty surgical site infections: a driver to support investment in quality improvement strategies to reduce infection rates. NZMJ. 2016; 129 (1432): 51-58.



“connected”