

SSI Improvement Matters

Newsletter from the national SSII Programme



SSII Surgical Site Infection Improvement Programme

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Welcome to our first Surgical Site Infection Improvement (SSII) Programme newsletter, SSI Improvement Matters – a biannual update showcasing SSII Programme achievements.

The SSII Programme was rolled out to all district health boards (DHBs) in 2013, with a focus on orthopaedic surgery. Since then a second focus area, preventing surgical site infections (SSIs) in cardiac surgery, has been developed and is about to commence in DHBs that perform cardiac surgery.

Many of us still don't fully understand the serious consequences that SSIs can have for patients. If bacteria contaminate the surgical site during surgery they may cause an SSI, which can be devastating for the patient. SSIs can lead to serious illness, longer hospital stays, long-term disability, emotional and financial stress, and can result in loss of life.

The good news is that we can reduce the risk of SSIs by following some important clinical practice interventions: using the right antibiotic and right dose at the right time, using the right alcohol-based antiseptic skin preparation, and clipping not shaving the surgical site. Monitoring performance against these recommendations and collecting and reporting SSI data helps us to see where improvements can be made, so that we can make changes.

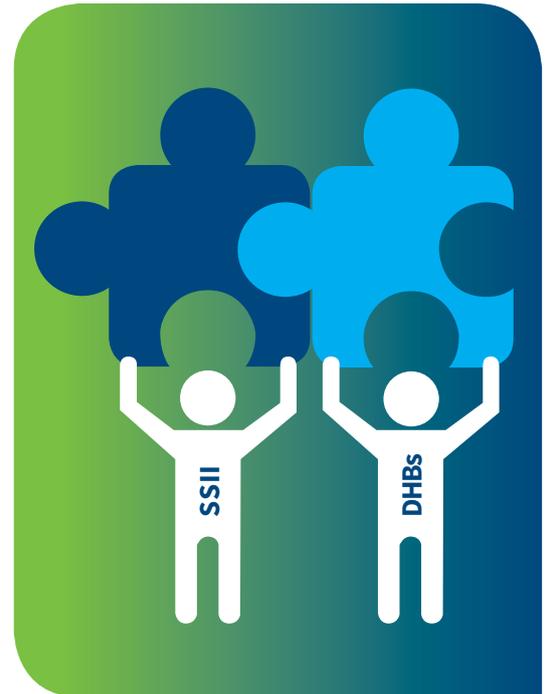
So, let's keep working together to reduce the risk of surgical site infection for every patient, every time.

Dr Arthur Morris
Clinical Lead,
National SSII Programme

Collaboration leads to impressive achievements

A collaborative effort between DHBs and the national SSII Programme team resulted in significant achievements in 2014.

- Consistent, standardised approach for collecting and reporting high quality data about orthopaedic SSIs is now being used by all 20 DHBs.
- Three clinical practice recommendations for preventing SSIs rolled out nationally. These are being applied by all DHBs:
 - Alcohol-based skin preparation – chlorhexidine gluconate or povidone-iodine.
 - Antibiotic prophylaxis – Correct antibiotic and dose: 2g cefazolin. Correct time: antibiotic prophylaxis administered as a single dose 0 to 60 minutes before knife to skin.
 - Clipping not shaving the surgical site.
- Development and launch of cardiac surgery SSII Programme.
- Planning for third procedure focus area – possibly caesarean sections.
- Five SSII Programme National Orthopaedic SSI Reports published, detailing SSI rates, ▶



- ▶ performance against clinical practice recommendations by DHB (anonymised) and more. Read the reports at: www.hqsc.govt.nz/our-programmes/infection-prevention-and-control/projects/surgical-site-infection-improvement/resources/.
- DHB SSI performance data submitted quarterly for the Health Quality & Safety Commission's (the Commission) Quality and Safety Markers (QSMs). Read the QSM reports here: www.hqsc.govt.nz/our-programmes/health-quality-evaluation/projects/quality-and-safety-markers/.



It's very important that we do all work together to make sure that we decrease the rate of surgical site infections because it will improve patient outcomes and definitely improve the patient experience."

Dr Maria MacKintosh, Anaesthetist

How are DHBs performing?

DHB performance against the SSII Programme's clinical practice recommendations is improving. The July to September 2014 National Orthopaedic SSI Report showed that:

- Performance against antibiotic prophylaxis timing was 96% up from 89% in July to September 2013. The QSM target is 100%.
- The correct antibiotic prophylaxis dose (2g cefazolin) was given 88% of the time. The QSM target is 95%. There has been a good ongoing improvement in performance with this QSM in each surveillance period.
- Skin preparation performance is improving and getting closer to the QSM target of 100%, sitting at 98% nationally.
- DHBs significantly improved performance with stopping antibiotic prophylaxis at the optimal time after surgery. Nationally, DHBs now sit at 80% for this recommendation, up from 71% last quarter and 56% in July to September 2013.
- Four DHBs met the target for all three QSMs.

Great work! Well done to all DHBs.

Did you know?

With implementation of the SSII Programme, the estimated number of SSIs avoided over ten years is 1,678. The estimated 10 year savings from SSI costs avoided is \$18.8 million¹.

Benefits from the SSII Programme are estimated to build steadily as infection rates decrease and the number of procedure types in the Programme increase.

Find out more about the SSII Programme and the SSI interventions. Watch our series of short videos: www.hqsc.govt.nz/our-programmes/infection-prevention-and-control/projects/surgical-site-infection-improvement/resources/.

I certainly am excited about a future with less surgical site infection. Firstly from the patient's point of view it's going to mean that they will have less pain and suffering and that their recovery from surgery will be more rapid.

"From a surgeon's point of view, wound infection is one of the very potent sources of damage that we can cause. Anything that will reduce wound infection is a) good for the patient and b) good for the surgeon."

Dr Tony Hardy, Clinical Head Orthopaedics, Auckland DHB

The SSII Programme is one component of the Health Quality & Safety Commission's Infection Prevention and Control (IPC) Programme. The IPC Programme aims to reduce the harm and cost of healthcare associated infections, including SSIs. Auckland and Canterbury DHBs are the lead agency for the SSII Programme, which was rolled out nationally in 2013.

1. Hefford M., Black M., Wyatt S. (2011). Cost benefit analysis of the proposed national surgical site infection surveillance and response programme. Sapere Research Group, Wellington: New Zealand.

Engagement with anaesthetists at Auckland DHB improves antibiotic dosing

Auckland DHB has increased the dose of antibiotic prophylaxis that its orthopaedic patients receive, after data showed that the dose given often differed to best-practice guidance from the SSII Programme.

Auckland DHB's SSII Programme champions met with the clinical director and quality improvement lead for anaesthesia to discuss the data and provide evidence on the benefits of using two grams cefazolin instead of one gram.

Anaesthetists now receive a graph every month tracking their use of two grams cefazolin. Performance has risen from 85% in July to September 2013, to achieving above the performance target of 95% in January to March 2014 and sustaining 95% in July to September 2014. If Auckland DHB's SSII champions had not engaged with anaesthetists, improvement may have remained unchanged or occurred at a slower rate.

West Coast DHB achieves 100% in all SSI QSMs

West Coast District Health Board (WCDHB) has worked hard to align clinical practice with best practice recommendations for reducing SSIs in orthopaedic surgery.

Their hard work has paid off. WCDHB is one of four DHBs to achieve the target for all SSI QSMs in the July to September 2014 surveillance period – reaching 100% in all three: correct skin preparation, antibiotic timing and administering the optimal dose of antibiotic.

When WCDHB first implemented the SSII Programme, baseline SSI data showed that performance administering two grams of cefazolin instead of one gram was low. Since then it has steadily risen, reaching 100% during the April to June 2014 surveillance period and remaining at this level in July to September 2014.

"We had to provide the rationale for why we needed to use two grams of cefazolin, and we provide ongoing education and reminders," says Julie Ritchie, WCDHB's SSII Programme coordinator and clinical nurse specialist, infection prevention and control.

The orthopaedic theatre team has been integral in helping to progress performance. Antibiotic dose and timing is now reviewed prior to surgery during the surgical check list time out discussion.

They also helped to reinforce and increase compliance with the SSII Programme's antibiotic guidelines by laminating and placing them in a highly visible area for easy reference.

"You don't have to go looking for it. It's within easy access for them to quick reference why they are doing it, and what they need to do at what dose," she adds.

Performance using the correct skin preparation has also improved. The DHB started with a baseline of 88% and reached 100% compliance in April to June 2014, sustaining this result in July to September 2014.

Antibiotic timing improvement has been significant in the last quarter, jumping from 89% in April to June 2014, hitting 100% in July to September 2014.

"What we're there for is good patient outcomes. We want to meet our QSMs so that we are doing the best for our patients. That's our goal," she says.