

SSI Improvement Matters

Newsletter from the national SSII Programme



SSII Surgical Site Infection Improvement Programme

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Patients go to hospital in order to get better. They don't expect to come out with an infection acquired during their stay.

New Zealand is extremely fortunate to have a national patient safety initiative that guides best practice to help prevent surgical site infections (SSIs), the Surgical Site Infection Improvement (SSII) Programme. This is helping standardise pre- and post-operative practices in orthopaedic surgery in all DHBs throughout the country, which will help reduce the risk of SSIs in patients. It has also standardised the collection of high quality data, which means we have national "apples to apples" comparisons of infection rates that can be reported on, analysed and used in a useful way by DHBs.

Despite the challenges that accompany any culture change, DHBs have supported the Programme extremely well. While many were doing their own improvement activities when the Programme began in 2013, recommendations made by the Programme are now being embedded within all DHB as usual practice; using an alcohol-based skin preparation, using the right antibiotic prophylaxis at the right time, not using antibiotic prophylaxis beyond the recommended time of 24 hours, and clipping not shaving the surgical site.

Those of you who are helping drive improvements through the SSII Programme are helping reduce infection rates in New Zealand hospitals, and your efforts deserve to be applauded.

*Dr Arthur Morris
Clinical Leader, NZ SSII Programme*

Keeping on getting better

- The collaborative effort between DHBs and the national SSII Programme has resulted in many improvements since 2013.
- All 20 DHBs are now submitting high quality and timely data about orthopaedic SSIs.
- Three DHBs are now submitting data in the first stage of the rollout of the SSII Programme into cardiac surgery.
- Seven national orthopaedic reports have been published since the Programme began, detailing SSI rates, QSM (quality and safety marker) compliance by DHBs and more.
- Since the January to March 2015 quarter and in response to requests by DHB CEOs, these reports are no longer anonymised. Quarterly national reports can be found at <http://www.hqsc.govt.nz/our-programmes/infection-prevention-and-control/projects/surgical-site-infection-improvement/resources>

How DHBs are performing

Highlights from the last quarterly report, January to March 2015 include:

Antibiotic timing: DHB performance against the prophylaxis timing was 96%. The QSM target is 100%, which was achieved by four DHBs in January to March 2015. Sixteen DHBs were greater than 95% on time for primary procedures.

Antibiotic dose: DHB performance was 95% in the January to March quarter, the first period where the national target has been met. Seventeen DHBs now meet this QSM fully.

Alcohol based skin preparation: Sixteen DHBs have reached 100% compliance, which is the QSM target. All DHBs are greater than 95% compliant.

Three DHBs met all three QSMs; South Canterbury, Wairarapa and Whanganui. Congratulations!

Antibiotic stewardship, a global issue

When the SSII Programme began only 61% of patients received antibiotic prophylaxis for less than 24 hours. By the first quarter this year, prophylaxis was stopped within 24 hours in 90% of cases. This is improving the standard of patient care for patients undergoing orthopaedic surgery in New Zealand hospitals.

There is no evidence that continuing prophylaxis beyond 24 hours after surgery reduces the rate of surgical site infections, however there is good evidence that it presents a risk to patients, as over-exposure to antimicrobials is associated with a risk of colonisation with antibiotic resistant organisms.

It is also a matter of antibiotic stewardship. Antibiotic resistance is an increasing concern and can be attributed to the overuse of antibiotics. As has recently been highlighted by WHO's World Antibiotic Awareness Week campaign, "Antibiotics: Handle with Care", antibiotics are a precious resource and should be preserved.

"The costs of this problem are huge and increasing," says Dr Arthur Morris, clinical lead of the SSII Programme. "If we aren't more prudent, then many of the treatments of modern medicine, such as surgery, will be adversely affected. We all need to play our part and use antibiotics safely."

Meet an expert

The SSII Programme is now supported by an Expert Faculty Group (EFG), comprised of orthopaedic surgeons, nursing college representatives, physicians and anaesthetists.

This issue we talk to one of the EFG, Mr Simon Young, a consultant surgeon at North Shore Hospital, with a special interest in knee arthroplasty. He is also a senior lecturer at the University of Auckland, where he is completing his doctoral thesis on the topic of preventing infections in knee arthroplasty.

Why did you join the SSII's expert faculty group?

Any arthroplasty surgeon will tell you that the most feared complication is deep infection. It takes one of the most successful procedures we do in medicine and turns it into a massive complication, both for the patient and the surgeon. It usually requires multiple re-operations to cure, and a lot of time in hospital for the patient. So it's much better to prevent the problem rather than dealing with it once it occurs.

Is it very common in knee arthroplasty?

Infection rates for knee arthroplasty are reported to be between one and two percent of procedures. But we perform thousands of knee replacements patients each year in New Zealand so it is something that we see frequently and it's extremely disappointing for all concerned.

How is the SSII Programme helping?

The power and strength of a Programme like this is that it gives us a clear indication of what our infection rates are. It will let us know if it's increasing, and what strategies we're implementing might be reducing the rates of infection. As with any problem that you're trying to solve, the first thing you need to do is understand it better.

The fact that QSMs exist makes people strive to achieve them. So our rates of antimicrobial timing and correct antibiotic are reasonably good, but the fact that these guidelines and targets exist is, I think, changing practice and making people focus on what is important. And the fact that we have a nationwide body overseeing it, allows us to adjust the QSMs as new literature comes to light.

What's so special about the Programme?

Arthur (Dr Morris) and Sally (Dr Roberts) should be commended for setting this up. It's a unique programme worldwide. I present about infection in arthroplasty at a lot of international meetings, and I'm not sure that anywhere else has managed to implement something like this on a nationwide level. Other countries are impressed and envious of us being able to do this. I think it's a benefit of living in a small country with a cohesive healthcare system, and where we have engagement from hospitals and healthcare staff. This is something I think we take for granted.

South Canterbury DHB: how did they do it?

South Canterbury DHB (SCDHB) is one of three to achieve 100% compliance in all three QSMs in the SSII Programme in the last quarter. How did they do it?

"From my point of view, what worked well from the beginning for our DHB was the Commission setting up a stand to launch the programme," says Karen Foster, SSII coordinator in the Quality & Risk Department at SCDHB.

"This included Arthur Morris presenting to the grand round, a meeting of consultants, interns, GPs, nursing and allied health staff about the Programme. There was a lot of discussion about the Programme and it was an opportunity to ask questions, which was well received."

It helped that orthopaedic surgeons had already been working together with the anaesthetists, she says, as part of the Enhanced Recovery After Surgery (ERAS) programme. This helped pave the way for the introduction of the SSII concepts.

Steve Earnshaw, Clinical Director of Orthopaedics at SCDHB agrees. "So we had a multi-disciplinary team already there, and a culture where we could move to doing things in a team-related way. So we were able to leverage off that."

"There were all sorts of different steps and things we'd changed as part of the ERAS programme, and we still meet every four weeks, as a group - surgeons, nurses, GPs, managers, anaesthetists, physiotherapists, occupational therapists - to discuss anything that we need to improve. Everybody is there and everybody has a voice. That has been the key to success for us, really."

While data entry may be time consuming, it's still worth it, he says. "It's one of the challenges. We have lots of different programmes involving data collection ... The more we can coordinate the data we collect so that we're all collecting and measuring the same sorts of things, the easier it will become and the more viable the results."

"Measurement is a real issue in health because we have a lot of data, but not so much information. Information is hugely powerful and we can't change anything without it."

▶ The Programme continues to recommend 2g of cefazolin as the agent and dose of choice for antimicrobial prophylaxis in orthopaedic procedures. However 1.5g of cefuroxime has been added as an acceptable alternative. The "Dose QSM" is now: 95% of hip and knee replacement patients receive 2g or more of cefazolin or 1.5g of cefuroxime. This updated QSM was used in the January-March 2015 National Report.

▶ Patients can help reduce their risk of surgical site infection. We recommend that patients are given the *Preventing infection after surgery* pamphlet before their operation, produced as part of the *Open for Better Care Campaign*. This can be downloaded from the Commission website at <http://www.hqsc.govt.nz/our-programmes/infection-prevention-and-control/publications-and-resources/publication/2366/>

▶ SSII Programme coordinators and champions now have easier access to the latest SSII Programme documents and training materials, via a new Programme repository set up in the South Island health portal, HealthLearn. This repository has a wealth of information developed by the Programme. SSII coordinators and champions have been sent their login details. Go to <http://healthlearn.ac.nz/course/view.php?id=249>