Health Quality & Safety Commission New Zealand
Kupu Taurangi Hauora o Aotearoa

Surgical Site Infection Improvement Programme champions webinar

SSII Surgical Site Infection Improvement Programme

7 December 2022

Opening karakia

E te huinga
Whāia te mātauranga, kia mārama
Unuhia te anipā,
te nguha, kia mahea
Kia whai take ngā mahi katoa
Tū māia, tū kaha
Aroha atu, aroha mai
Tātou i a tātou katoa
Hui e tāiki e

For this gathering
seek knowledge, for understanding
draw out the anxiety
and uncertainty, clear it away
have purpose in all that you do
stand tall, be strong
let us show respect
for each other.
It is complete

Agenda

Time	Item	Presenter
1.00 pm	Welcome Opening karakia	Ruth Barratt – IPC specialist Jeanette Bell – project manager
1.05 pm	Update from data analyst	Grace Clendon – data analyst
1.10 pm	Cardiac update	Arthur Morris – SSIIP clinical lead
1.30 pm	First year review of light surveillance	Ruth Barratt
1.45 pm	Orthopaedic manual update	Ruth Barratt
1.50 pm	Q&A	Ruth Barratt
1.55 pm	Close Closing karakia	Ruth Barratt Jeanette Bell

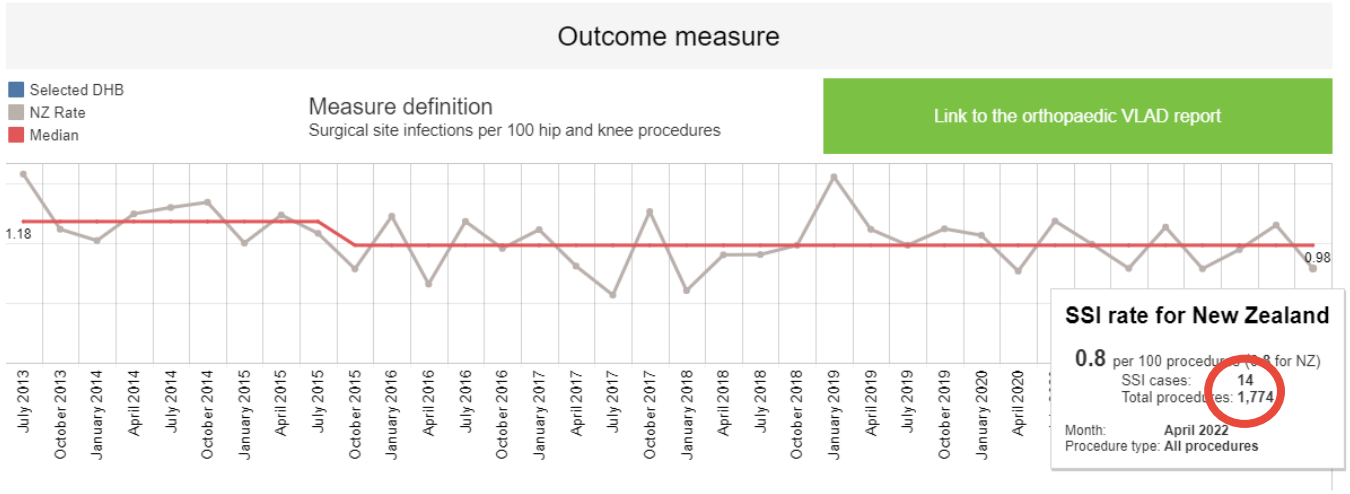
Data analyst update

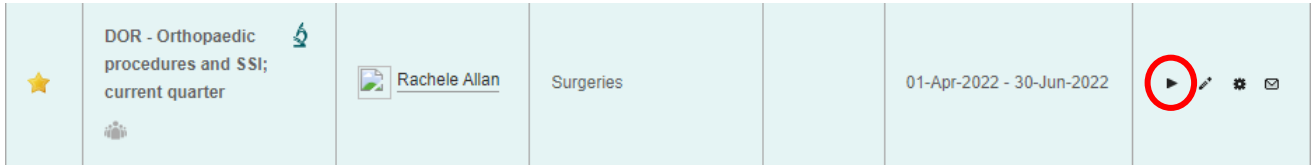
A little bit about me

- Part-time data analyst
- Work with Harini (full-time analyst for IPC)
- Surgical site infection draft reports and dashboard
- Anti-staphylococcal bundle
- Any miscellaneous tasks

Reviewing the data

DHB	Surveillance type	Number of procedures
Auckland DHB	Full surveillance	60
Bay of Plenty DHB	Light surveillance	64
Canterbury DHB	Light surveillance	156
Capital & Coast DHB	Light surveillance	81
Counties Manukau Health	Full surveillance	113
Hauora Tairawhiti DHB	Full surveillance	32
Hawke's Bay DHB	Light surveillance	0
Hutt Valley DHB	Light surveillance	68
Lakes DHB	Light surveillance	82
MidCentral DHB	Light surveillance	72
Nelson Marlborough Health	Light surveillance	142
Northland DHB	Light surveillance	97
South Canterbury DHB	Light surveillance	0
Southern DHB	Light surveillance	85
Taranaki DHB	Light surveillance	36
Waikato DHB	Full surveillance	195
Wairarapa DHB	Light surveillance	12
Waitemata DHB	Light surveillance	289
West Coast DHB	Full surveillance	8
Whanganui DHB	Full surveillance	30
Total	**Light and full surveillance**	1622





Data

	Total procedures	Total
DHB	Number of procedures	Numb
Auckland DHB	60	25
Bay of Plenty DHB	86	42
Canterbury DHB	156	79

Review of cardiac surgery Surgical Site Infection Improvement Programme (SSIIP)

(2014) 2015–2021

- All procedures: 15,853
- SSI 670 (4.2%)
- Adult: 13,953 (88%)
  - 37% CARD, 63% CABG (93% = CBGB)
- Paediatrics: 1,900 (12%),
  - ~100% CARD procedures

Cardiac surgery adults: BMI

BMI	n	SSI %	OR	P
< 25	2,169	1.8	Reference	
≥ 25–< 30	4,472	2.8	1.6	0.013
≥ 30–< 35	3,086	4.7	2.7	< 0.001
≥ 35–< 40	1,346	7.3	4.3	< 0.001
≥ 40	698	8.3	4.9	< 0.001

Cardiac surgery – risk factors

[Dr Arthur Morris presented the review's draft results for risk factors for a surgical site infection following cardiac surgery.

These results will be published early 2023]

The move to light surveillance for orthopaedic surgery

Changes to data collection and reporting

Data collection

- Mandatory data collection ↓ from 35 to 5 fields
- Outcome data for all cases
- Process measure data for SSI cases only
    - Investigation of SSI cases required

Reporting

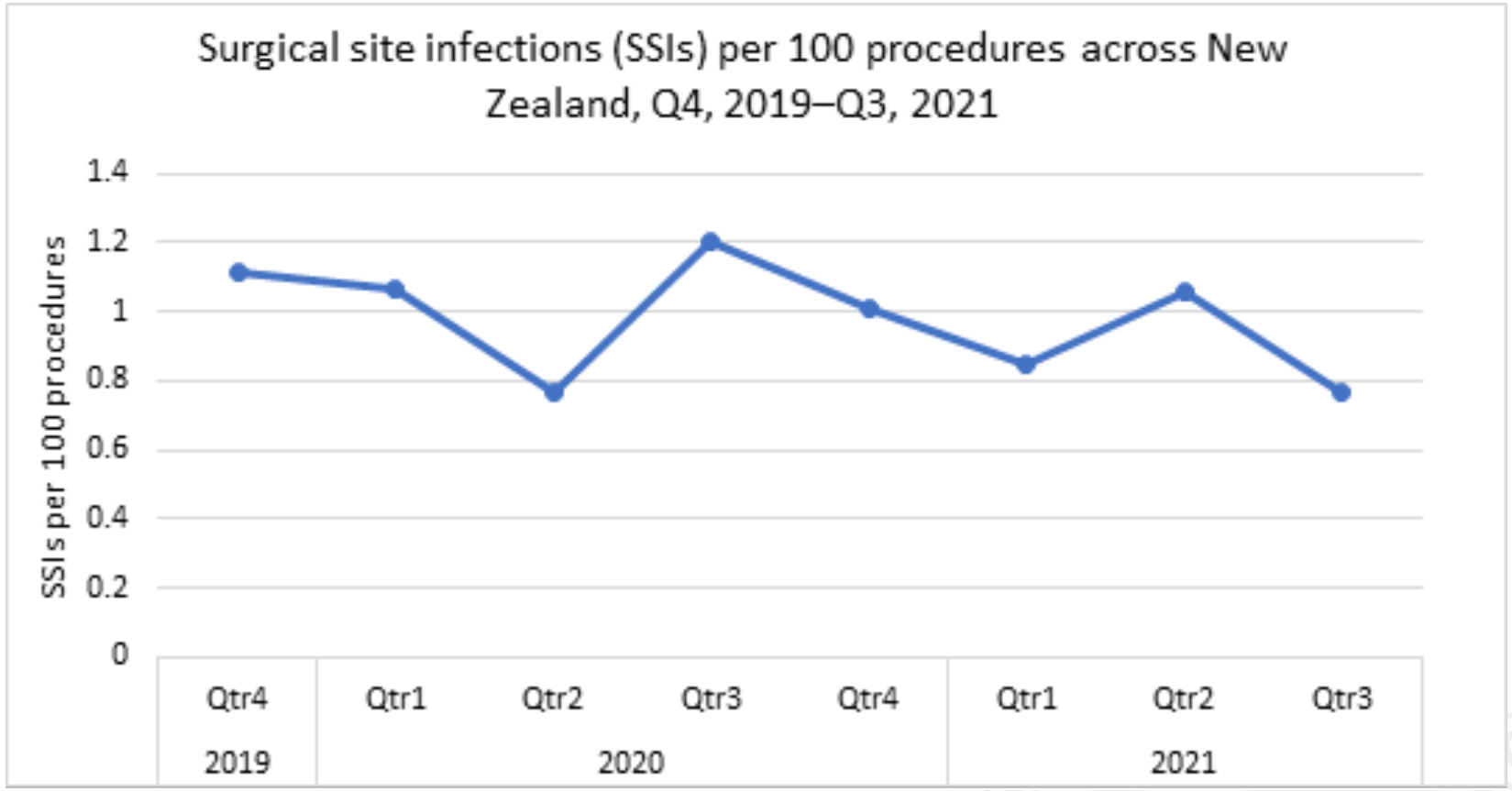
- SSI rate maintained for all
- QSM for process measures ends
- Changes to risk factor analysis reporting

Light surveillance – first 12 months

- Light surveillance commenced on 1 October 2020
- 14 districts have made the move to light surveillance
- May 2022 – Health Quality & Safety Commission board report
  - 12 months worth of data collection
- Results shared as a poster at ACIPC and IPCNC conferences

Analysis and outcomes – outcome measure (SSI rate)

- Across all 20 districts there was a decrease in the orthopaedic SSI rate
- Not statistically significant



Process measures for SSI cases

- Early signs of a statistically significant decrease for light surveillance districts for:
  - antibiotic timing
  - antibiotic dosing
- No change for process measures for SSI cases for full surveillance

Table 3: Aggregated light surveillance DHB compliance rates for antibiotic prophylaxis (Q4 2019 – Q3 2020 compared to Q4 2020 – Q3 2021)

Measure	Pre-implementation compliance rate	Post-implementation compliance rate	P-value
Dosing	94.9% (56/59)	87.7% (50/57)	0.01
Timing	94.9% (56/59)	82.5% (47/57)	<0.001

Time savings

- Median time saving of 16 hours per quarter
- Time savings freed up time for in-depth reviews of SSI cases
- SSI investigation tool and variable life-adjusted display (VLAD) report introduced to support light surveillance

SSI investigation tool

- Introduced as a resource end 2021
- Use of the SSI investigation tool is a **requirement** of light surveillance
- Used to review orthopaedic SSIs, prioritising deep and organ space infections and superficial infections leading to readmission
- Optional (but encouraged) use for full surveillance
- Helps identify other contributing factors for SSI, apart from the existing process measures

Surgical site infection investigation tool

For background information on this tool, go to: www.hqsc.govt.nz/our-programmes/infection-prevention-and-control/publications-and-resources/publication/4398/

Explanations of abbreviations used in this tool are given at the end.

Patient information		
NHI:		Insert patient sticker here if available.
Gender:	☐ M ☐ F ☐ Other	
Date of birth:		
Admission/discharge		
Was the patient seen/phoned by pre-admission clinic/staff?		☐ Y ☐ N
Date of admission (for surgery):		__/__/____
Date of discharge:		__/__/____
Date of death (if applicable):		__/__/____
Date of re-admission:		__/__/____
Transfer from another acute care hospital?		☐ Y ☐ N
Pre-operative length of stay (primary admission):		
Postoperative length of stay (primary admission):		
Infection details		
Type of SSI:	☐ Superficial ☐ Deep ☐ Organ space ☐ Not stated	
Organisms identified:	1	2 3
Date SSI symptoms identified:		Date SSI confirmed by surgical team:
ACC treatment claims process initiated?	☐ Y ☐ N ☐ Unknown	SAC rating: ☐ 1 ☐ 2 ☐ 3 ☐ 4

Surgical site infection investigation tool (print version) 1

Summary

- No statistically significant decrease in the SSI rate since introduction
- Early signs of a statistically significant decrease in antibiotic timing and antibiotic dosing process measures – need to track over time
- Saves time but some surgeons like to see all data for all cases
- SSI investigations required but not always performed

Orthopaedic guide review

- Supersedes the Commission's *Orthopaedic surgery implementation manual*, 2019
- Publication due January 2023
- Online version plus hard copy x 1 for each district
- Use in conjunction with other document resources, eg, ICNet guides

Orthopaedic surgery implementation guide

Te aratohu mahi hāparapara kōiwi

For providers implementing and delivering a national Surgical Site Infection Improvement Programme in Aotearoa New Zealand

Orthopaedic guide - key updates

- Inclusion of light surveillance
- Re-order of contents to flow better
- Updated references particularly antimicrobial prophylaxis
- Clarification of a case inclusion relating to previous SSI
- No changes to definitions or process charts

Have you a question about the SSIIP?

Upcoming dates

• Quarterly QSM, SSIIP dashboard and variable life-adjusted display (VLAD) reports published	16 December
• End of SSIIP quarter	31 December
• Quarterly SSIIP investigation summary form due	6 January 2023
• Quarterly SSIIP data for Q3 Jul–Sept 2022 procedures due	31 January 20223
• Quarterly SSIIP investigation meeting	Date TBC early Feb

Closing karakia

Kua mutu a tātou mahi
Ka tae te wā
mō te whakairi te kete
I te kete kōrero,
I te kete whakaaro
Hei tiki atu anō mā tatou
Tauwhirotia mai mātou katoa
Ō mātou hoa
Ō mātou whānau
Āio ki te Aorangi.
Hui e tāiki e.

Our work has finished
the time has arrived
to gather one’s thoughts in the basket
that contains discussion
and concepts
that we may use it again in the future
protect us all
our colleagues
our families
peace to the universe.
it is complete.

Abbreviations used in this presentation

ACIPC – Australian College for Infection Prevention and Control

BMI – body mass index

CABG – coronary artery bypass graft

CARD – cardiac surgery

CBGB – coronary artery bypass graft with chest and donor site incisions

DHB – district health board

IPC – infection prevention and control

IPCNC – Infection Prevention and Control Nurses College

OR – odds ratio

QSM – quality safety marker

SSI – surgical site infection

SSIIP – surgical site infection improvement programme