



# HEALTH QUALITY & SAFETY COMMISSION NEW ZEALAND

*Kupu Taurangi Hauora o Aotearoa*

**17 February 2015**

**University of Otago 1-day Symposium**

**Responding to infectious diseases in New Zealand**

**Update on emerging issues**



# NZ Health Quality & Safety Commission

- Formally established under the NZ Public Health & Disability Act 2010
- Triple Aim:
  - Improved health and equity for all populations
  - Improved quality, safety and experience of care
  - Better value for public health resources



# HQSC role and purpose

To lead and coordinate work across the health and disability sector for the purposes of:

- monitoring and improving the quality and safety of health and disability services
- helping providers across the health and disability sector to improve the quality and safety of health and disability services

# How the Commission adds value

Shining the light on variation, and key areas for improvement

Being an intelligent commentator and advocate for change

Lending a hand by making expert advice, guidance and tools available

# Approach

- Mix of programmes
  - Strategic
  - Long Term
  - Improvement
- Annual review of portfolio of programmes
- Continuous refreshing of improvement projects to keep pace with emerging trends, new knowledge and stakeholder expectations

# Improvement Projects - Features

- Focus on a specific area or topic for improvement
  - Known actions that if implemented will reduce harm
  - Call to action for people to make change
  - Builds leadership, re-usable networks and capability for improvement
  - Uses a recognised improvement methodology
  - Improvement can be measured
- National scale, accelerated pace
- Time limited, building sustainability
- Significant resource investment
- Quality and Safety Markers (QSMs) – process and outcome measures

	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
IPC:						
• Hand Hygiene	delivery	delivery	delivery	transition	BAU	
• CLAB	start-up	delivery	transition / evaluation	BAU		
• SSI	scoping	start-up	delivery	delivery	delivery / transition	evaluation
Med. Safety:						
• Hospital eMedicines		delivery	delivery	delivery / transition	evaluation	
• Opioid Collaborative		scoping	start-up	delivery	delivery	transition / evaluation
Perioperative Harm		scoping	start-up	delivery	delivery	transition / evaluation
Falls	scoping	start-up	delivery	delivery	transition / evaluation	
New Programme 1			scoping	start-up	delivery	delivery
New Programme 2				scoping	start-up	delivery

# SSII

Surgical Site Infection  
Improvement Programme

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## Approaches to improvement and results to date



# HQSC Infection Prevention and Control

- Overarching IPC programme focus:
  - Raising the strategic profile and importance of IPC
  - Supporting clinical leadership
  - Measuring and monitoring progress
  - Capability building in quality improvement
- Current improvement projects:
  - Surgical Site Infection Improvement Programme (SSIIP)
  - Hand Hygiene New Zealand (HHNZ)



# SSIIP progress to date

- Canterbury and Auckland DHBs delivering SSIIP in partnership with HQSC
- Managed by a steering group with wide representation and expertise
- All 20 DHBs engaged in the programme
  - 8 DHBs participating since March 2013
  - Remaining 12 DHBs joined August-Oct 2013
  - ICNet-based national data warehouse supports data collection, analysis and reporting (local and national reports – quality and safety markers)

# SSII Programme SG members:

- Dr Sally Roberts, Clinical Head of Microbiology, ADHB
- Dr Arthur Morris, Clinical Microbiologist, ADHB
- Trevor English, General Manager, Canterbury Health Laboratories, CDHB
- Mr Imran Ramanathan, Cardiothoracic Surgeon, ADHB and NZ Representative on the Australian and New Zealand Society of Cardiac and Thoracic Surgeons (ANZSCTS)
- Dr Allan Panting: MidCentral DHB, Orthopaedic Surgeon, Executive Director for Surgical Affairs, Royal Australasian College of Surgery (RACS), representing the Surgical College
- Mr Richard Lander, Orthopaedic Surgeon, MidCentral DHB, Executive Director for Surgical Affairs, Royal Australasian College of Surgery (RACS), representing the Surgical College (replacing Dr Allan Panting March 2015)
- Mr Kelly Vince, Orthopaedic Surgeon, Northland DHB
- Marie Russell, Perioperative Nurse, Grace Hospital, representing from the NZNO Perioperative Nurses College
- Dr Andrew McWilliams, Anaesthetist, Canterbury DHB, representing the Australia and New Zealand College of Anaesthetists (ANZCA)

## Informed by the Commission's Strategic IPC Governance Group, membership of which includes:

- Adrienne Morgan, IPC consultant, IPCNC private sector representative
- Arthur Morris, Clinical Microbiologist, Clinical Lead SSII Programme
- Don Mackie, Chief Medical Officer, Ministry of Health
- Geoff Cardwell, Consumer representative
- Jane O'Malley, Chief Nurse, Ministry of Health
- Jane Pryer, Senior Advisor - Healthcare Associated Infections & Communicable Diseases
- Jenny Parr, Assistant Director of Nursing & Director of IPC WDHB
- Jo Stodart, Charge Nurse Manager IPC Service SDHB, IPCNC DHB representative
- Joshua Freeman, Clinical Microbiologist ADHB, Clinical Lead HHNZ
- Lorraine Rees, Charge Nurse Manager IPC Service MCDHB, IPCNC DHB representative
- Mo Neville, Assistant Group Manager Quality and Patient Safety Waikato DHB
- Richard Everts, Infectious Diseases Physician, ASID representative
- Sally Roberts, Infectious Diseases Physician and Clinical Microbiologist, Clinical Head of Microbiology ADHB, National Clinical Lead IPC Programme
- Shawn Sturland, Clinical Director Intensive Care Unit CCDHB
- Trevor English, GM Hospital Support and Laboratories at Canterbury District Health Board

# Improvement approach

- A range of improvement methodologies:  
*‘the right tool for the right job’*
- Continuous quality improvement – shift from initial Lean Six Sigma approach to a more inclusive approach that uses a mixture of methodologies including the IHI Model for Improvement (PDSA cycles) and Frontline Ownership

# Local Barriers to Engagement

Include:

- ensuring senior executives actively involved
- overcoming resistance to working in multidisciplinary teams
- finding senior clinicians with time, energy and commitment to act as local ‘champions’
- time involved in manual inputting of data

## Northland DHB: Share the load

- Aim: reduce workload by creating shared data collection form
- Teamwork/PDSA cycles
- Result:
  - Collaborative manual data collection
  - Local solution
  - Increased engagement



*Champions for SSI improvement at Northland DHB (L to R):  
Sandra Cunningham, Jodie Wood, Helen Harris and Karen  
Bennett.*

# QSMs: Process Markers

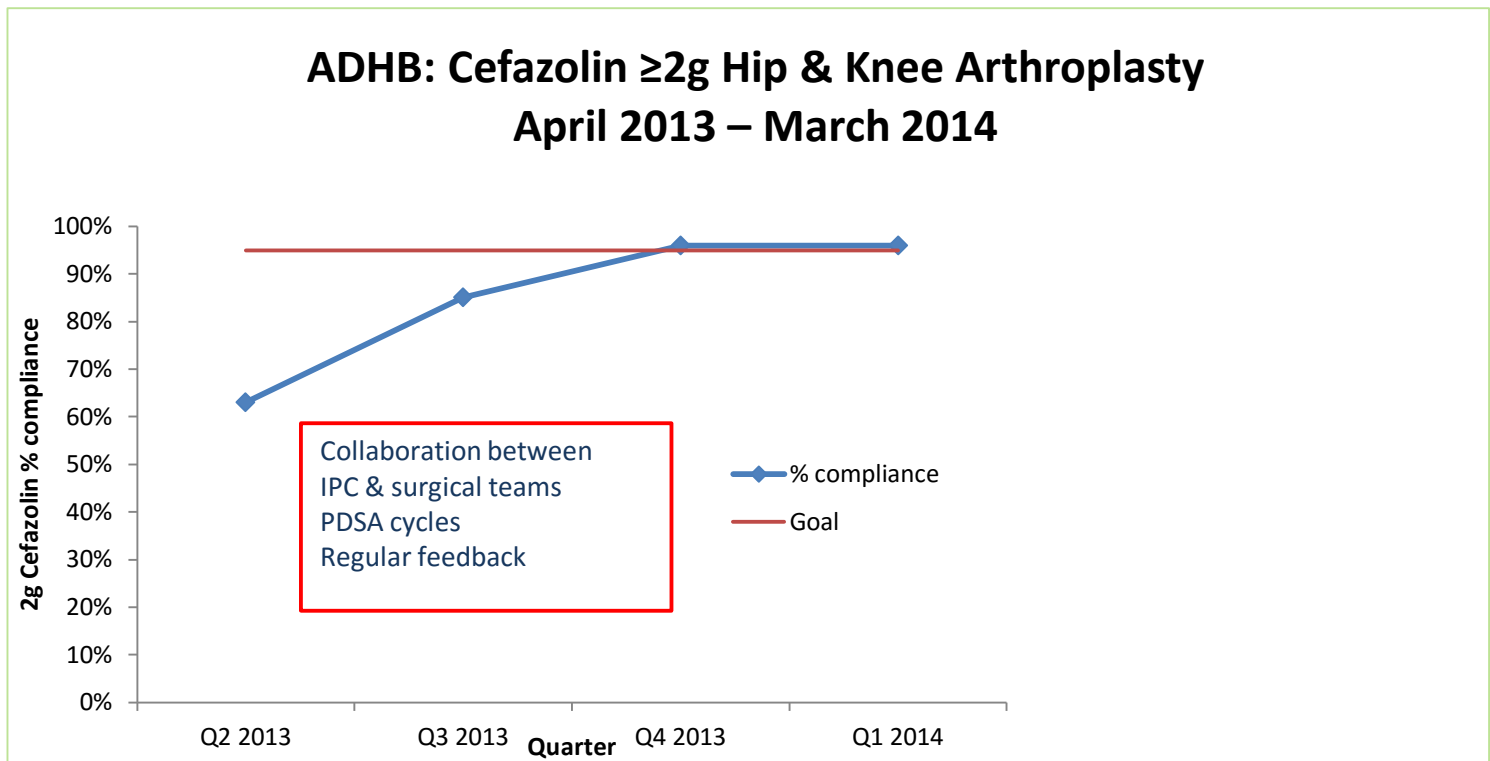
So what are the actual changes we've implemented?

In mid-2013 the programme identified the process quality and safety markers, in consultation with DHBs. These measures are intended to support consistent best practice, to monitor progress, help drive improvement and provide a focus for reporting to DHBs and the general public. The measures were confirmed as:

- Antibiotic prophylaxis given on time (0-60 minutes before knife to skin)
- Correct dose of recommended antibiotic – in this case cefazolin 2g or more
- Alcohol –based skin preparation – either chlorhexidine or povidone iodine



# ADHB: Cefazolin dose



# ADHB: Cefazolin dose





### What can you and your family/ whānau do to help prevent SSIs?

Before your operation:

- tell your doctor about other health problems you might have, such as diabetes – these could affect your surgery and your treatment
- If you smoke, talk to your doctor or ask to be referred to your local smoking cessation programme for support to stop smoking before your surgery – patients who smoke get more infections
- don't shave where you will have surgery.

### At the time of your operation:

- speak up if someone tries to shave you with a razor before surgery. Ask why you need to be shaved rather than clipped
- ask if you will get antibiotics before surgery.

### What are hospitals doing to prevent SSIs?

To prevent SSIs, doctors, nurses and other health care staff:

- clean their hands and arms up to their elbows with an antiseptic just before the operation
- wear hair covers, masks, gowns and gloves during the operation to keep the surgery area clean
- remove your hair around the operation site using electric clippers – not a razor, which could irritate the skin and make it easier to develop an infection
- give you antibiotics before your surgery starts
- clean the skin at the operation site with an antiseptic that kills bacteria (germs)
- clean their hands with soap and water or an alcohol-based hand rub before and after caring for you and other patients.



# QSM Compliance over time

QSM	March-June 2013	July-September 2013	October-December 2013	January-March 2014
On time (primary procedures)*	91%	89%	90%	92%
Dose $\geq$ 2g cefazolin	51%	63%	68%	78%
Alcohol based skin preparation	94%	97%	96%	98%
Post-op duration <24hrs	61%	56%	84%	76%

# Information relates to January–March 2014

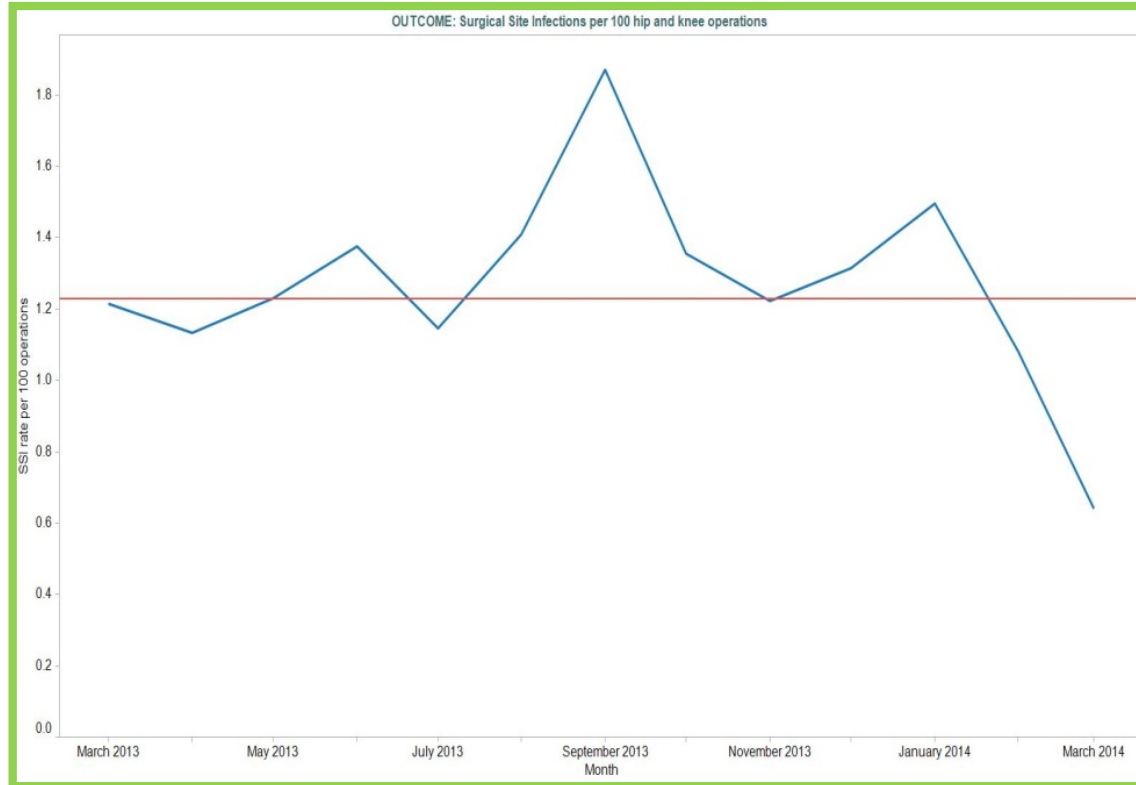
SURGICAL SITE INFECTION: Antibiotic given 0-60 minutes before 'knife to skin' (baseline data July to September 2013) (goal 100%)

PROCESS: 2 grams or more cefazolin given

PROCESS: Appropriate skin preparation

DHB name	2013			2014			DHB name	2013			2014		
	Q3	Q1	Q2	Q3	Q1	Q2		Q3	Q1	Q2	Q3	Q1	Q2
Nelson Marlborough	92	97	100	West Coast	13	30	100	Auckland	99	100	100		
South Canterbury	96	95	100	Nelson Marlborough	26	93	99	Bay of Plenty	91	96	100		
Whanganui	90	100	100	Capital & Coast	100	97	98	Capital & Coast	100	100	100		
Capital & Coast	93	93	99	Hutt Valley	0	98	97	Hutt Valley	100	98	100		
Lakes	100	99	99	Northland	47	94	97	MidCentral	98	98	100		
MidCentral	91	96	99	Waitemata	65	82	97	Nelson Marlborough	100	100	100		
Bay of Plenty	96	95	97	Bay of Plenty	72	93	96	Northland	100	100	100		
Northland	98	98	97	Lakes	96	96	96	South Canterbury	97	100	100		
Taranaki	93	100	97	Tairāwhiti	100	90	96	Tairāwhiti	100	100	100		
Wairarapa	50	100	97	Auckland	85	96	95	Taranaki	63	100	100		
Waitemata	87	95	97	South Canterbury	77	97	94	Wairarapa	97	94	100		
Auckland	97	98	96	Wairarapa	88	92	94	West Coast	88	96	100		
Canterbury	94	97	96	Whanganui	9	95	94	Whanganui	100	100	100		
Hawke's Bay	95	100	93	Waikato	76	86	93	Canterbury	99	99	99		
Southern	77	88	91	Counties Manukau	74	80	90	Lakes	100	100	99		
West Coast	87	100	89	Canterbury	46	65	86	Hawke's Bay	100	100	98		
Waikato	86	89	87	Southern	22	65	81	Waitemata	95	100	98		
Hutt Valley	99	52	86	Hawke's Bay	11	60	72	Southern	57	92	97		
Counties Manukau	50	80	83	Taranaki	15	17	31	Counties Manukau	51	93	88		
Tairāwhiti	90	88	48	MidCentral	2	3	4	Waikato	96	92	88		
New Zealand average	85	92	94	New Zealand average	55	78	85	New Zealand average	91	98	97		

# Outcome measure: Hip and knee SSI rates March 2013-March 2014



# Where SSII is now ...

- Good engagement in all 20 DHBs
- Quality improvement central focus
- Significant improvement in dose of cefazolin given
- Cefazolin 'usually' given on time
- Variation in duration of postop antibiotic prophylaxis
- Too early to show benefit in the outcome measure
- Results are posted on the Commission website at:  
[www.hqsc.govt.nz](http://www.hqsc.govt.nz)

## Looking forward

- Next procedure is cardiac surgery
  - Coronary artery bypass graft surgery  $\pm$  donor site
  - Cardiac surgery involving valves
- A third procedure is under discussion
- Automated data collection and reporting a priority



# Acknowledgments

- All the work being done by IPC nurses, surgical teams and SSI champions
- Clinical Lead for SSI programme – Dr Arthur Morris
  - [ArthurM@adhb.govt.nz](mailto:ArthurM@adhb.govt.nz)
- Clinical Lead for IPC programme – Dr Sally Roberts
  - [SallyRob@adhb.govt.nz](mailto:SallyRob@adhb.govt.nz)

**Any feedback or questions welcome**  
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