



HEALTH QUALITY & SAFETY  
COMMISSION NEW ZEALAND

*Kupu Taurangi Hauora o Aotearoa*

## **Quality and safety markers update**

Quarter 2 (April–June) 2020

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## Note on change to reporting due to COVID-19

In response to the COVID-19 pandemic, the Health Quality & Safety Commission temporarily suspended the requirement for district health boards (DHBs) to report on manually collected quality and safety marker (QSM) measures from 23 March 2020 until 30 June 2020. For example, falls risk assessment and care planning for the falls QSM and number of cardiac arrests for the patient deterioration QSM.

We also extended the date for submitting data for all surgical site infection (SSI) process and outcome measures to 30 June 2020.

During this period, we continued to monitor and publish outcome measures where data is obtained from the National Minimum Dataset (NMDS), for example, falls with a fractured neck of femur.

The measures that published in the reports for the January–March and April–June 2020 quarters are:

- outcome measures sourced from the NMDS
- hand hygiene – both the five moments for hand hygiene and *Staphylococcus aureus* bacteraemia (SAB) measures
- SSIs up to the end of March 2020.

In the local DHB report only, we will publish data for other measures submitted for the January–March and April–June 2020 quarters. The markers affected are: electronic medicine reconciliation; falls; patient deterioration; pressure injury; and safe use of opioids. This is not aggregated to make a New Zealand total; it is only displayed for the DHBs that submitted data.

From 1 July 2020, we expect DHBs to have started collecting for all QSM measures and to submit this data on 6 November 2020.

DHBs are expected to start collecting data for the consumer engagement QSM in December 2020 and provide an initial report in June 2021.

The above dates may change in response to the COVID-19 pandemic.

## Falls

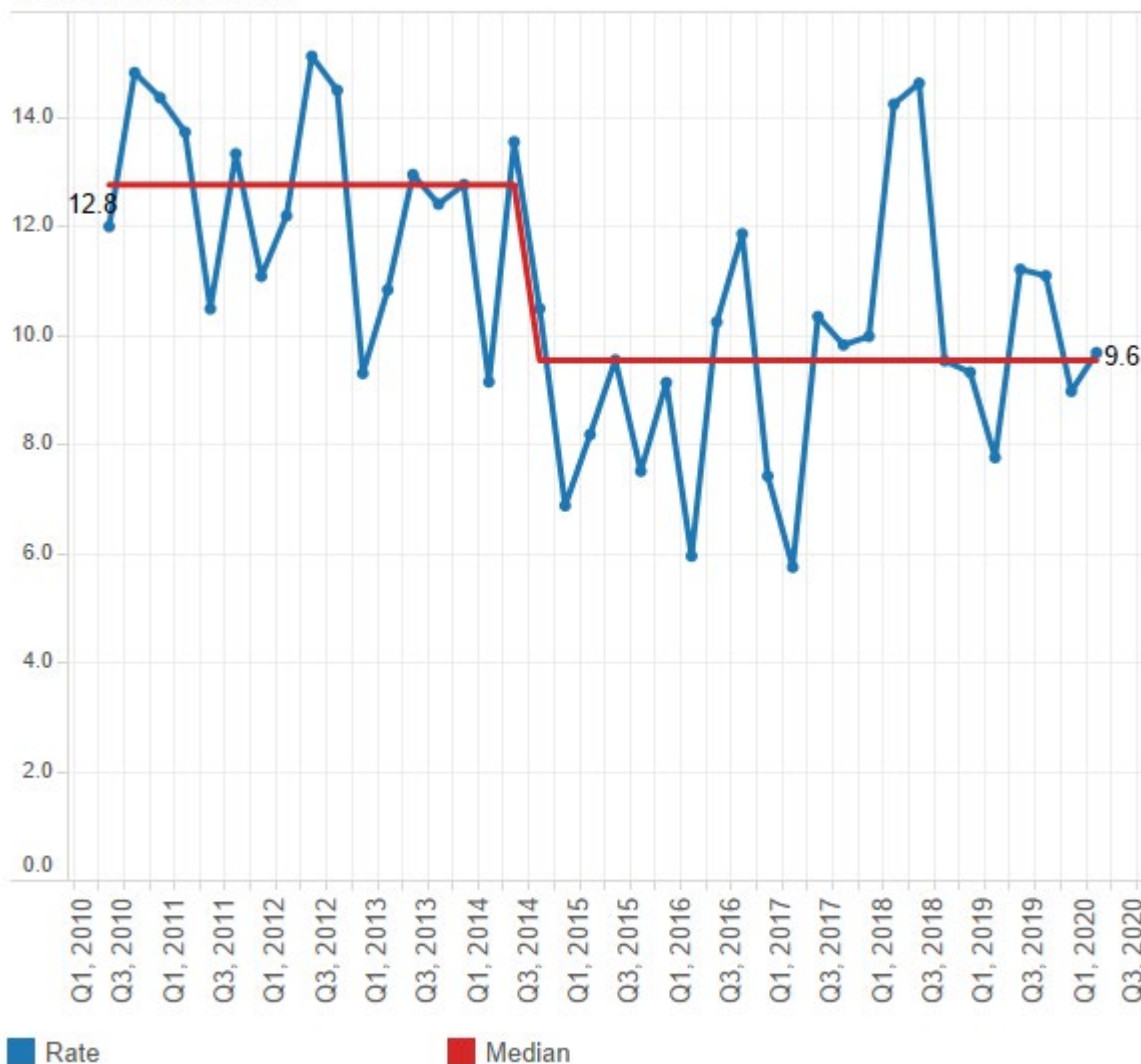
### Outcome marker: In-hospital falls resulting in a fractured neck of femur per 100,000 admissions

There were 92 falls resulting in a fractured neck of femur (broken hip) in the 12 months ending June 2020.

Figure 1 shows the quarterly rate of in-hospital falls causing a fractured neck of femur per 100,000 admissions.

The median of this measure was 12.8 in the baseline period of July 2010 to June 2012. It had moved down since September 2014 to 9.6 per 100,000 admissions – a significant improvement. This reduction is supported by the observed improvement in the assessment and plan process marker results. There has been some variation since the shift, particularly from 2018. The peak showed in Figure 1 in quarters 1 and 2, 2018 can be explained by a slight increase in the number of falls across several DHBs.

Figure 1: Outcome marker, in-hospital falls with fractured neck of femur per 100,000 admissions by quarter

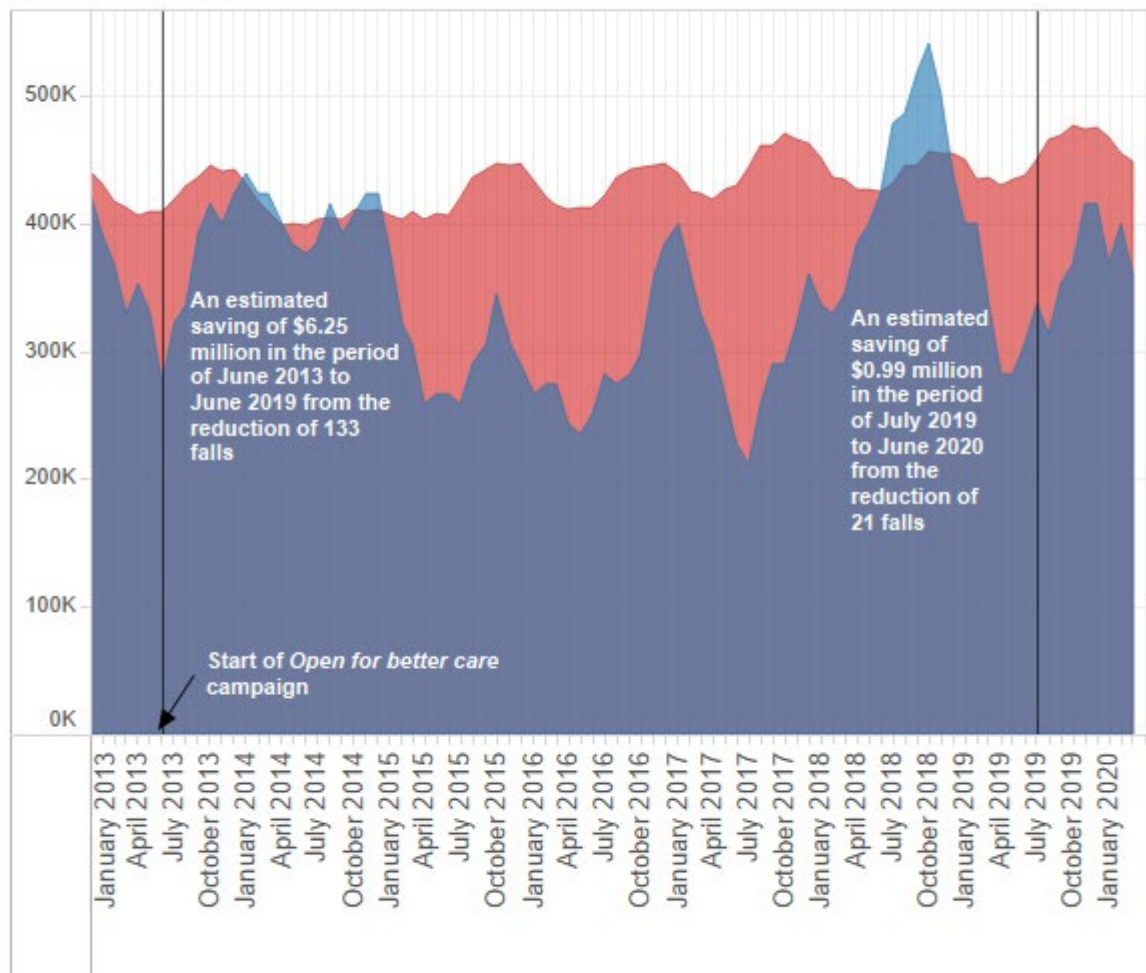


The number of 92 in-hospital falls resulting in a fractured neck of femur is significantly lower than the 113 we would have expected in the last 12 months, given the falls rate observed in the period between July 2010 and June 2012. The in-hospital falls reduction is estimated to have saved \$0.99 million from July 2019 up until June 2020. This is based on an estimate of \$47,000<sup>1</sup> for a fall with a fractured neck of femur (Figure 2). Savings of \$7.25 million have been made since the Commission’s reducing harm from falls programme began.

We know some of these patients are likely to be admitted to aged residential care on discharge from hospital, which is estimated to cost \$135,000 per occurrence.<sup>2</sup>

If we conservatively estimate that 20 percent of the patients who avoided a fall-related fractured neck of femur would have been admitted to an aged residential care facility, the reduction in falls represents \$1.36 million in total avoidable costs since July 2019.

Figure 2: Cost/saving associated with in-hospital falls with fractured neck of femur (6-month moving average)



The saving is based on an estimated cost of \$47,000 for a fall with a fractured neck of femur.

Expected Observed

<sup>1</sup> de Raad J-P. 2012. *Towards a value proposition: scoping the cost of falls*. Wellington: NZIER.

<sup>2</sup> *Ibid.*

## Hand hygiene

### Process marker 1: Percentage of opportunities for hand hygiene taken

Despite the increased workload with COVID-19, the DHB infection prevention and control (IPC) and hand hygiene teams remained committed to having excellent hand hygiene practice throughout their DHB to prevent the spread of COVID-19 in hospitals.

In March–June 2020, national compliance with the five moments for hand hygiene was recorded at 87 percent. This is the highest result for this measure since the hand hygiene programme began, when it was 62 percent (July–October 2012).

Figure 3: Process marker, percentage of opportunities for hand hygiene taken

Auckland	70	75	75	76	77	76	76	79	78	81	83	84	84	84	85	86	85	85	86	86	86	86	86	87
Bay of Plenty	43	59	67	65	75	80	77	77	80	83	83	82	78	81	81	85	83	83	81	76	76	80	78	78
Canterbury	60	65	67	68	68	67	62	73	77	78	78	78	79	83	81	80	81	82	81	82	83	82	82	84
Capital & Coast	60	62	75	71	75	75	76	72	79	81	80	78	82	79	76	84	82	80	82	83	84	85	85	89
Counties Manukau	59	70	72	75	72	74	77	81	78	77	81	83	81	84	84	85	87	87	87	87	88	85	85	87
Hauora Tairāwhiti	74	73	79	78	81	70	72	69	72	73	73	73	69	72	71	71	64	66		72	72	77	81	86
Hawke's Bay	54	65	73	72	70	72	81	81	85	86	90	87	88	89	87	88	89	85	87	88	85	89	88	83
Hutt Valley	47	62	73	82	61	50	60	66	78	78	80	80	80	80	82	80	78	79	81	83	86	84	83	87
Lakes	62	64	71	68	74	79	86	80	82	77	73	82	80	82	81	84	82	77	81	82	80	79	74	81
MidCentral	65	72	70	72	66	72	72	76	78	75	75	81	81	79	81	79	75	79	78	79	81	76	78	84
Nelson Marlborough	50	55	64	67	70	71	75	74	80	81	75	76	81	78	81	79	80	81	85	88	79	79	81	84
Northland	77	73	68	76	69	66	76	80	84	83	86	87	88	86	87	84	87	88	88	88	88	85	85	88
South Canterbury	60	54	63	72	75	86	78	84	84	80	72	67	80	66	76	79	75	82	83	84	83	77	76	77
Southern	63	62	59	69	72	75	76	78	85	86	85	83	86	83	86	82	82	82	81	81	83	83	79	86
Taranaki	65	64		83	71	68	60	69	77	77	84	78	78	70	72	73	82	78	66	70	70	74	64	71
Waikato	67	60	72	66	71	76	79	77	82	79	83	86	87	84	85	82	84	83	78	79	80	79	80	85
Wairarapa	71	68	77	78	82	81	80	79	80	81	79	87	81	81	82	93	90	87	82	91	90	89	88	
Waitematā	62	73	74	71	75	79	80	80	80	85	81	83	85	86	86	88	89	90	89	89	90	89	90	92
West Coast	66	66	73	71	72	77	80	81	83	86	78	81	79	80	82	79	78	82	81	84	86	82	81	89
Whanganui	70	74	75	77	78	79	83	82	84	85	84	84	84	85	86	87	86	88	84	85	86	87	87	90
New Zealand	62	67	71	71	73	73	75	77	80	81	81	82	83	84	84	85	85	85	85	86	85	85	85	87
	Jul–Oct 2012	Nov 2012–Mar 2013	Apr–Jun 2013	Jul–Oct 2013	Nov 2013–Mar 2014	Apr–Jun 2014	Jul–Oct 2014	Nov 2014–Mar 2015	Apr–Jun 2015	Jul–Oct 2015	Nov 2015–Mar 2016	Apr–Jun 2016	Jul–Oct 2016	Nov 2016–Mar 2017	Apr–Jun 2017	Jul–Oct 2017	Nov 2017–Mar 2018	Apr–Jun 2018	Jul–Oct 2018	Nov 2018–Mar 2019	Apr–Jun 2019	Jul–Oct 2019	Nov 2019–Feb 2020	Mar–Jun 2020

Upper group

Middle group

Lower group

- Upper group: ≥ 70 percent before quarter 3, 2014; 75 percent in quarters 3 and 4, 2014; and 80 percent since quarter 1, 2015
- Middle group: 60 percent to target
- Lower group: < 60 percent
- Hand hygiene national compliance data is reported three times every year, not quarterly

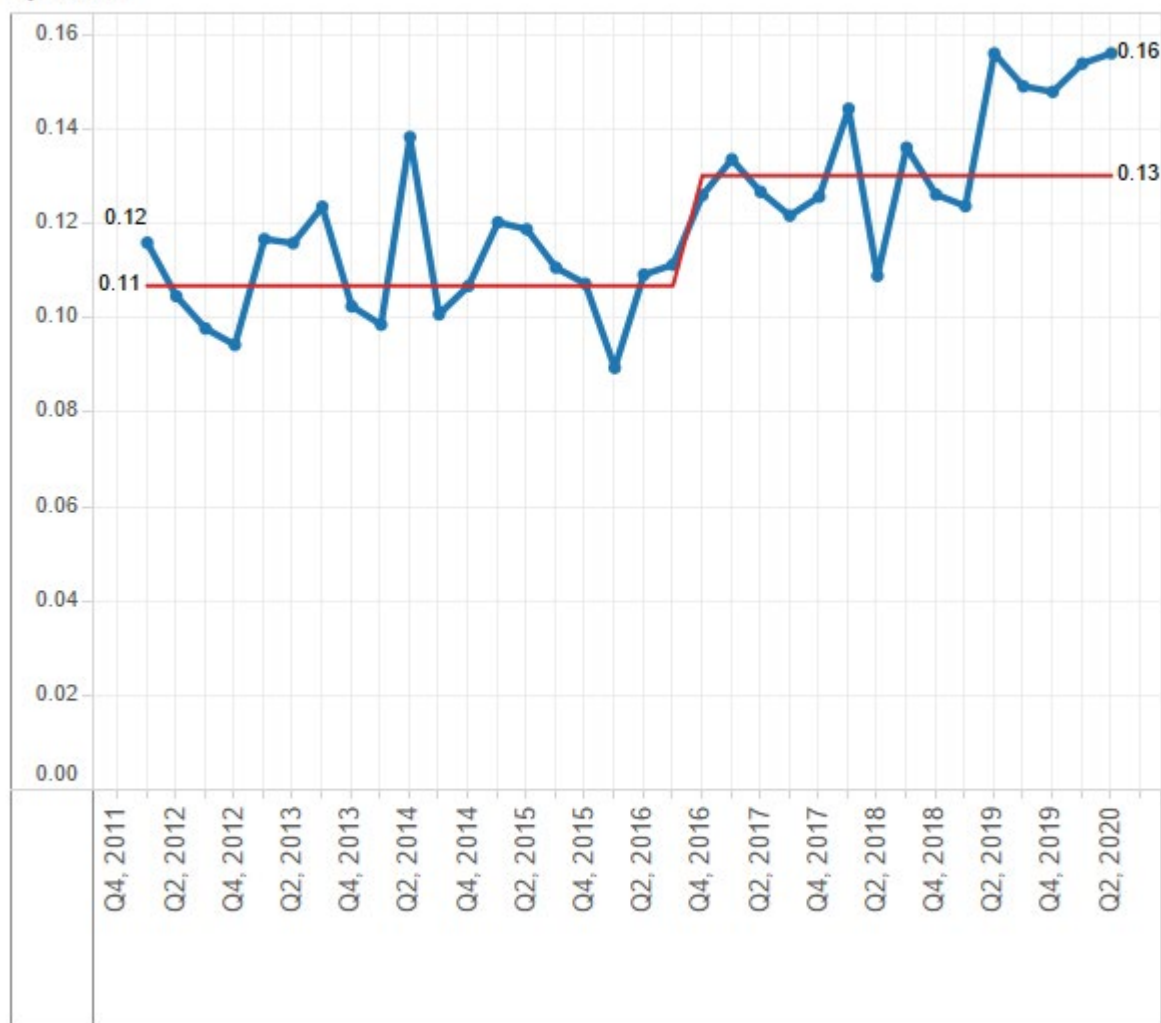
- The reporting periods for hand hygiene data have changed slightly as of November 2019. The reports now cover equal four-monthly periods.

## Outcome marker: Healthcare associated *Staphylococcus aureus* bacteraemia (SAB) per 1,000 bed-days

Healthcare associated SAB can be associated with medical devices or surgical procedures, which means the onset of symptoms may occur outside of the hospital (community onset).

Figure 4 displays the quarterly healthcare associated SAB per 1,000 bed-days. The quarterly rate has been consistently high since quarter 2, 2019. The Commission will be working with DHBs over the next year to collect the source of SAB cases, such as central lines, peripheral lines and surgical procedures. This data will help to identify potential areas for improvement.

Figure 4: Outcome marker, *Staphylococcus aureus* bacteraemia per 1,000 bed-days by month



■ Median      ■ Rate



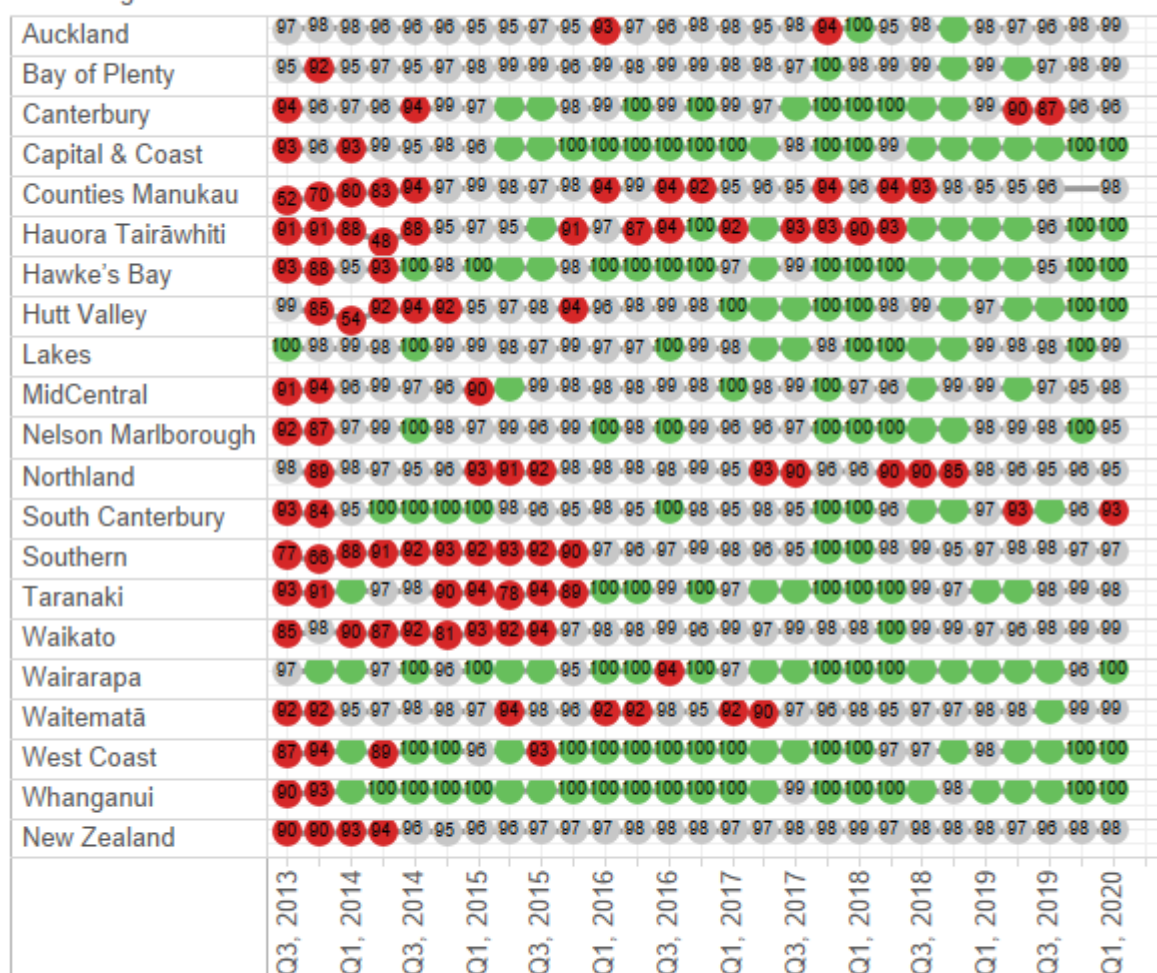
## Surgical site infection improvement (SSII) – orthopaedic surgery

As the Commission uses a 90-day outcome measure for SSIs, the data runs one quarter behind other measures. Information in this section relates to hip and knee arthroplasty procedures from quarter 3, 2013 to quarter 1, 2020.

### Process marker 1: Antibiotic administered in the right time

For primary procedures, an antibiotic should be administered in the hour before the first incision ('knife to skin'). As this should happen in all primary cases, the threshold is set at 100 percent. In quarter 1, 2020, 98 percent of hip and knee arthroplasty procedures involved the giving of an antibiotic within 60 minutes before knife to skin. Seven DHBs achieved the national goal. Capital & Coast has achieved 100 percent for all of the last seven quarters.

Figure 5: Process marker, percentage of hip and knee arthroplasty primary procedures where antibiotic given 0–60 minutes before 'knife to skin'



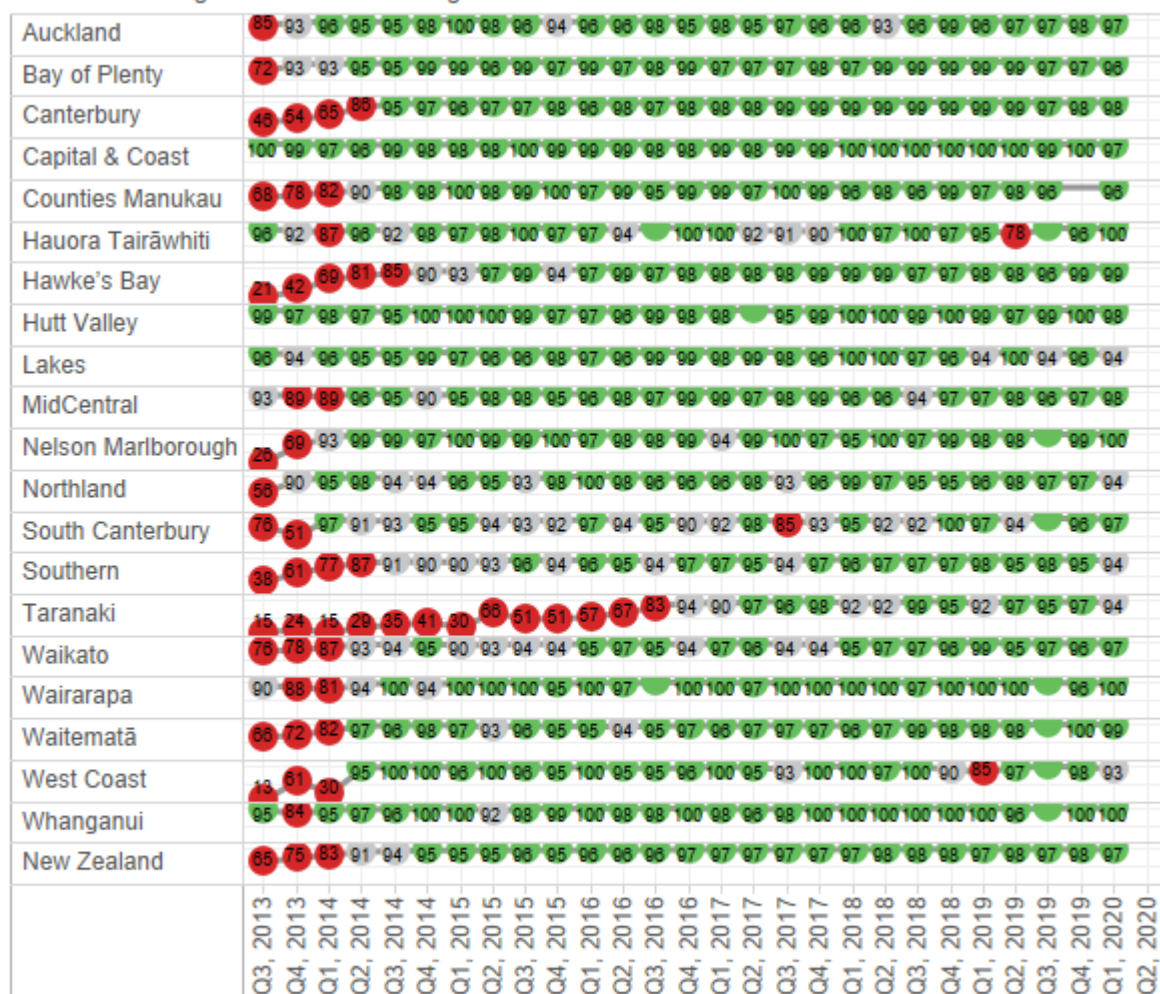
Note: For Auckland DHB, from Q3, 2017 to Q4, 2018, procedures conducted in private hospitals are excluded due to data collection issues.

- Upper group: 100 percent
- Middle group: 95–99 percent
- Lower group: < 95 percent

## Process marker 2: Right antibiotic in the right dose – cefazolin 2 g or more or cefuroxime 1.5 g or more

In the current quarter, 97 percent of hip and knee arthroplasty procedures received the recommended antibiotic and dose. Fifteen of the 20 DHBs reached the threshold level of 95 percent compared with only three in the baseline quarter.<sup>3</sup> Twelve DHBs reached the threshold level for at least the most recent six quarters .

Figure 6: Process marker, percentage of hip and knee arthroplasty procedures where 2 g or more cefazolin or 1.5 g or more cefuroxime given



Note: For Auckland DHB, from Q3, 2017 to Q4, 2018, procedures conducted in private hospitals are excluded due to data collection issues.

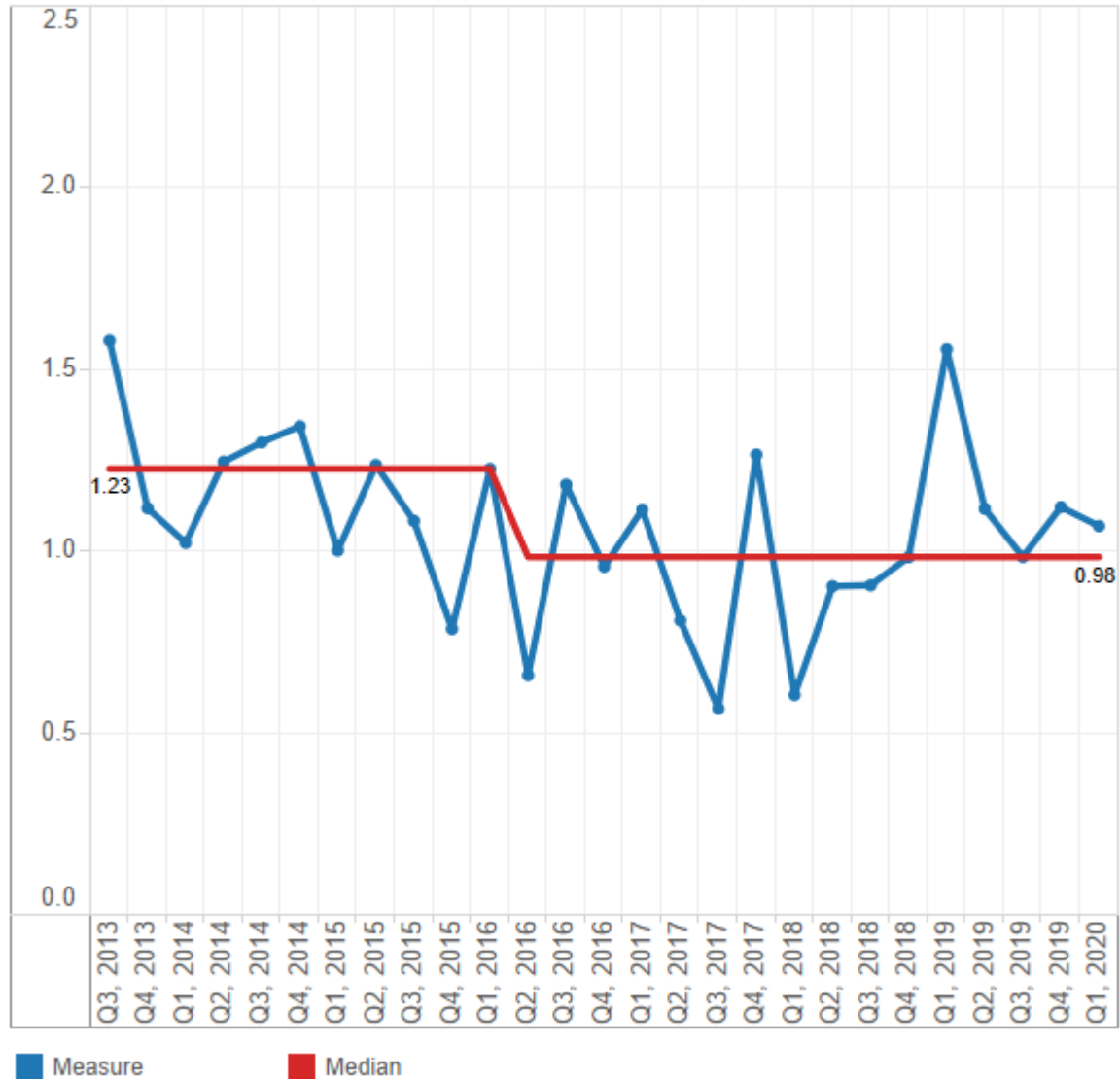
- Upper group: ≥ 95 percent
- Middle group: 90–94 percent
- Lower group: < 90 percent

<sup>3</sup> In quarter 1, 2015, 1.5 g or more of cefuroxime was accepted as an alternative agent to 2 g or more of cefazolin for routine antibiotic prophylaxis for hip and knee replacements. This improved the results of this process measure for MidCentral DHB significantly, from 10 percent before the change to 96 percent immediately after the change. It also increased the national result from 90 percent to 95 percent in quarter 1, 2015.

## Outcome marker: SSIs per 100 hip and knee operations

In quarter 1, 2020, there were 23 SSIs out of 2,152 hip and knee arthroplasty procedures, a quarterly SSI rate of 1.1 percent, which is higher than the current median of 0.98 percent since August 2015.

Figure 7: Outcome marker, surgical site infections per 100 hip and knee operations



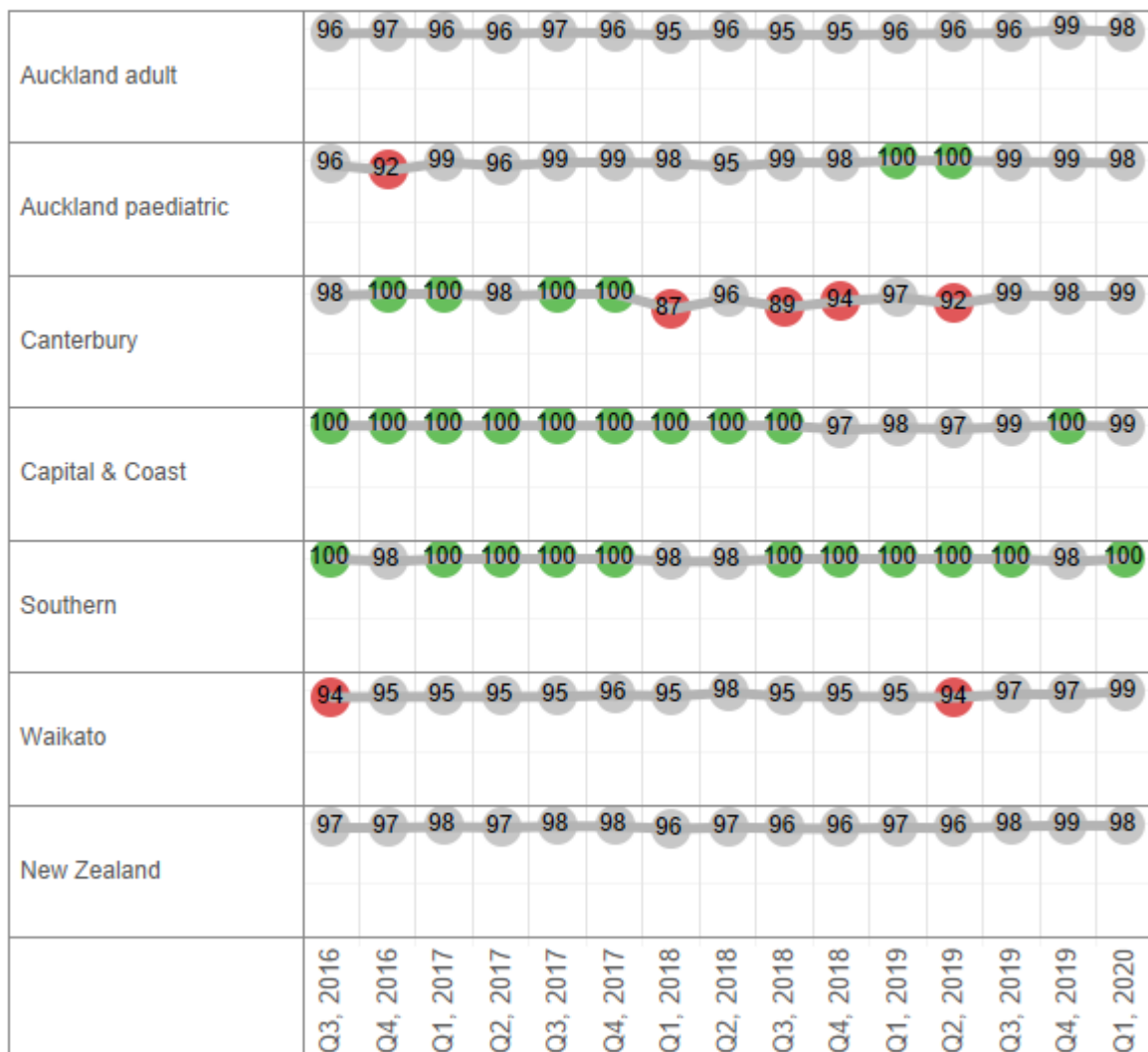
## Surgical site infection improvement (SSII) – cardiac surgery

There are three process markers and one outcome marker, which are similar to the markers for orthopaedic surgery.

### Process marker 1: Timing – an antibiotic to be given 0–60 minutes before knife to skin

The target is for 100 percent of procedures to achieve this marker. Only Southern DHB met the target this quarter.

Figure 8: Process marker, percentage of cardiac procedures where antimicrobial prophylaxis is administered as a single dose 0–60 minutes before knife to skin

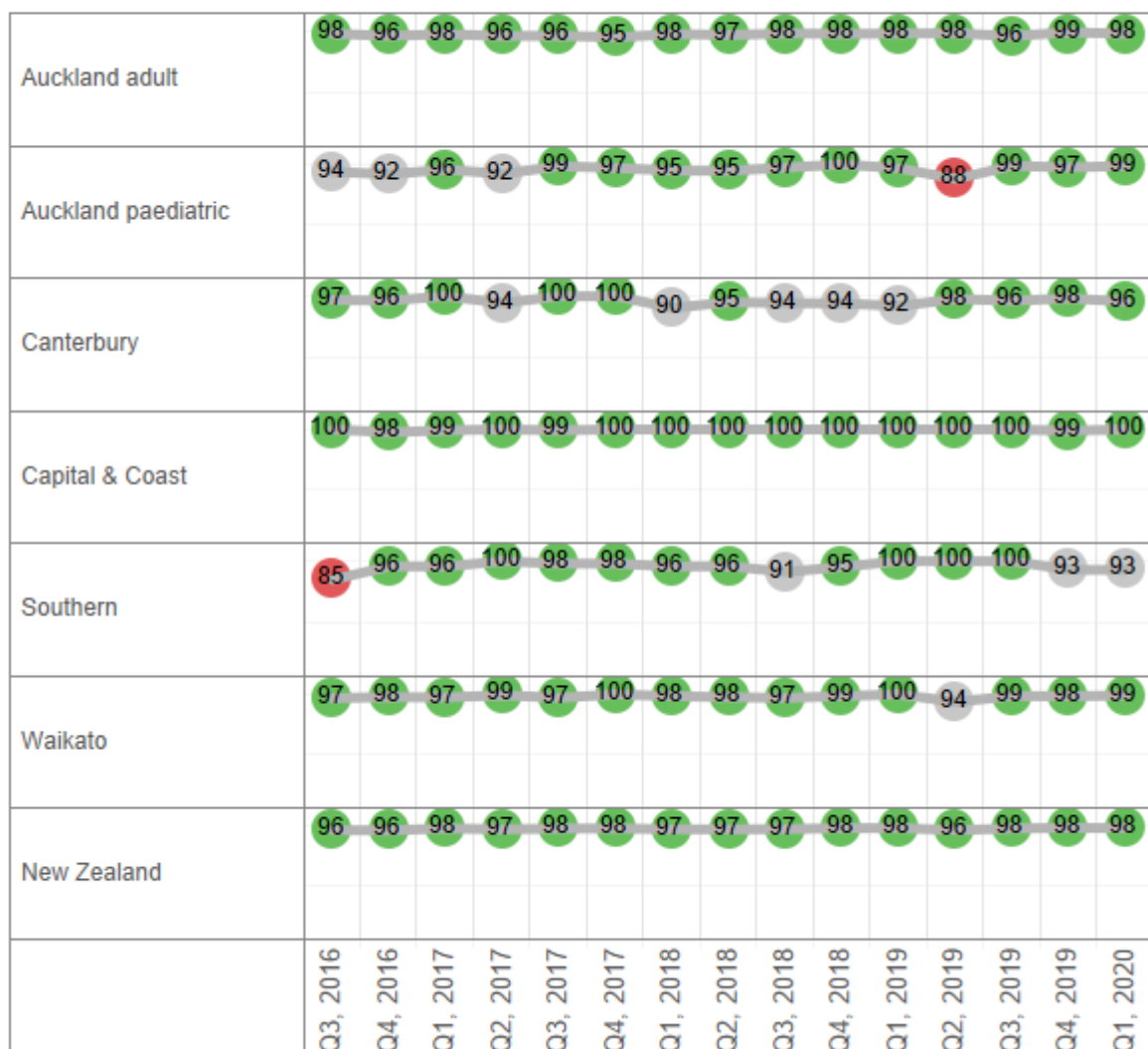


- Upper group: 100 percent
- Middle group: 95–99 percent
- Lower group: < 95 percent

## Process marker 2: Dosing – correct antimicrobial prophylaxis used in at least 95 percent of procedures

The antibiotic prophylaxis of choice is  $\geq 2$  g or more of cefazolin for adults and  $\geq 30$  mg/kg of cefazolin for paediatric patients, not to exceed the adult dose. The target is that either dose is used in at least 95 percent of procedures. All DHBs performing cardiac surgery except Southern DHB achieved the target this quarter. Auckland adult and Capital & Coast have consistently reached the threshold since the beginning of the programme.

Figure 9: Process marker, percentage of cardiac procedures where the first choice for antimicrobial prophylaxis is 2 g or more of cefazolin



- Upper group: > 95 percent
- Middle group: 90–95 percent
- Lower group: < 90 percent

### Process marker 3: Skin preparation – appropriate skin antisepsis is always used

Appropriate skin antisepsis in surgery involves alcohol/chlorhexidine or alcohol/povidone iodine. The target is 100 percent of procedures achieving this marker. All DHBs performing cardiac surgery except Southern DHB achieved the target this quarter. Auckland paediatric, Canterbury and Capital & Coast have all achieved 100 percent for the last seven quarters.

Figure 10: Process marker, percentage of cardiac procedures where alcohol-based skin antisepsis is always used

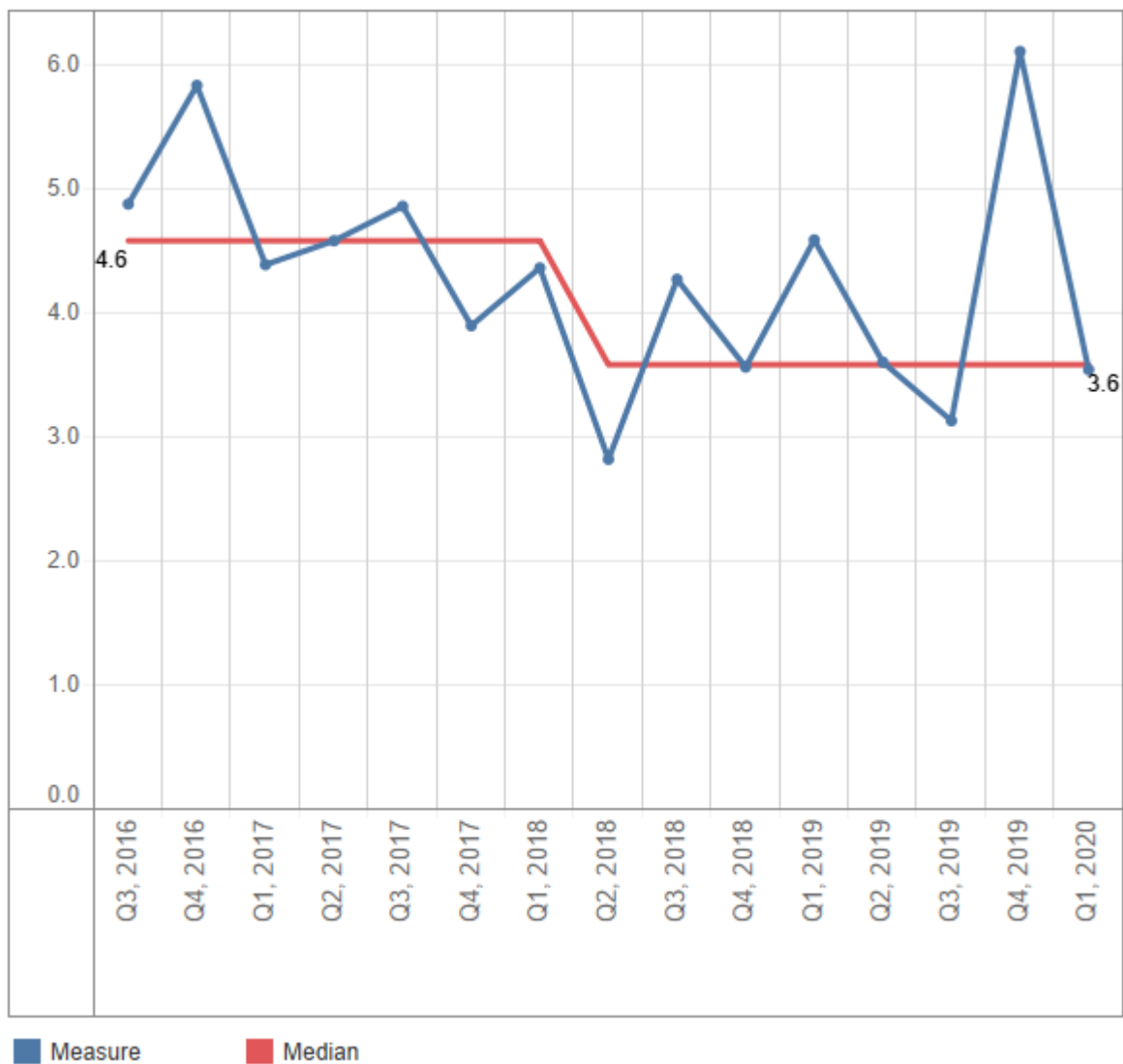


- Upper group: 100 percent
- Middle group: 95–99 percent
- Lower group: < 95 percent

## Outcome marker: SSIs per 100 procedures rate

In quarter 1, 2020, the rate of SSI cases per 100 cardiac procedures reduced from 6.1, its highest point ever, to 3.5. We will work closely with DHBs to understand the cause of the high point. In March 2018 the median shifted downwards from 4.6 SSI cases per 100 cardiac procedures to 3.6. This is a significant improvement since the beginning of the SSII programme. Cardiac surgical services in DHBs are dedicated to achieving high compliance with the process measures and implementing other quality improvement activities such as an anti-staphylococcal bundle.

Figure 11: Outcome marker, surgical site infections per 100 cardiac operations



## Safe surgery

The safe surgery QSM measures levels of teamwork and communication relating to the paperless surgical safety checklist.

Direct observational audit was used to assess the use of the three surgical checklist parts: sign in, time out and sign out. A minimum of 50 observational audits per quarter per part is required before the observation is included in uptake and engagement assessments.

Figure 12 shows how many audits were undertaken for each part of the checklist. In quarter 2, 2020, the minimum of 50 observational audits carried out has not been separately colour-coded due to lower numbers of audits completed during COVID-19 restrictions.

Figure 12: Observations – number of observational audits carried out (minimum of 50 per three months per checklist part)

	Sign in	Time out	Sign out
Auckland	108	119	94
Bay of Plenty	4	5	7
Canterbury	64	81	52
Capital & Coast	50	50	50
Counties Manukau	657	672	661
Hauora Tairāwhiti	60	56	52
Hawke's Bay	0	2	0
Hutt Valley	18	27	16
Lakes	51	52	51
MidCentral	57	60	50
Nelson Marlborough	1	3	11
Northland	54	60	51
South Canterbury	0	37	14
Southern	72	98	54
Taranaki	53	53	35
Waikato	32	33	34
Wairarapa	0	0	0
Waitematā	40	40	33
West Coast	0	0	0
Whanganui	6	10	6



Rates for uptake (all components of the checklist were reviewed by the surgical team) are only presented where at least 50 audits were undertaken for a checklist part. Uptake rates were calculated by measuring the number of audits of a part where all components of the checklist were reviewed against the total number of audits undertaken.

The components for each part of the checklist are shown in the poster on the right. During to COVID-19 restrictions, lower numbers of audits were completed. As a result, no targets are displayed. Data is not presented where there were fewer than 50 audits.



Figure 13: Percentage of audits where all components of the checklist were reviewed (target 100 percent)

	Sign in						Time out						Sign out					
	Baseline	Rolling	Q3, 2019	Q4, 2019	Q1, 2020	Q2, 2020	Baseline	Rolling	Q3, 2019	Q4, 2019	Q1, 2020	Q2, 2020	Baseline	Rolling	Q3, 2019	Q4, 2019	Q1, 2020	Q2, 2020
Auckland	98	100	100	100	100	100	93	99	99	99	100	99	98	99	100	100	99	99
Bay of Plenty	97	100	100	100	100		96	100	100	100	100			100	100	100		
Canterbury	91	99	100	100	96	98	92	96	97	98	87	98	96	100	100	99	100	100
Capital & Coast	96	100	100	100	100	100	97	100	100	100	100	100	97	100	100	100	100	100
Counties Manukau	99	100	100	100	100	100	100	100	100	100	100	100	99	99	97	99	99	99
Hauora Tairāwhiti	100	100	100	98	100	100	99	99	98	100	96	100		100				100
Hawke's Bay			85	82			78	65	55	63	81			85	81			
Hutt Valley			98	98				99	99	98	100			100	100			
Lakes		100	100	98	100	100		100	100	100	100		100	98	100	100	100	100
MidCentral	96				100	98	92				100	97	97					100
Nelson Marlborough	88				100		93				97		91	94			93	
Northland		98	100	98	98	94	91	99	99	100	98	100		100	100	100	100	100
South Canterbury										100								
Southern			100	100		99	98	100	100	100		100		100				100
Taranaki					71	75					82	77						
Waikato	81				99		67				92							100
Wairarapa	97			91			98			98						98		
Waitematā	96	99		98	100		96	100		100	100		94		100			
West Coast			100		100				100		100			100			96	
Whanganui			98	97					98	100				100				
New Zealand	93	98	98	98			93	97	97	97			94	98	98	98		

For more information about rounding and colouring, see the note.

**Baseline** = the average of the first 4 quarters of the programme from Q3, 2016 to Q2, 2017.

**Rolling** = the average of the latest 4 quarters: Q3, 2019 to Q2, 2020.

- Target achieved
- Less than 75 percent
- Between 75 percent and the target
- Fewer than 50 observations

The levels of team engagement with each part of the checklist were scored using a seven-point Likert scale developed by the World Health Organization. A score of 1 represents poor engagement from the team and 7 means team engagement was excellent. The target is that 95 percent of surgical procedures score engagement levels of 5 or above. During COVID-19 restrictions, lower numbers of audits were completed. As a result, no targets are displayed. Data is not presented where there were fewer than 50 audits.

Figure 14: Percentage of audits with engagement scores of 5 or higher (target 95 percent)

	Sign in engage						Time out engage						Sign out engage					
	Baseline	Rolling	Q3, 2019	Q4, 2019	Q1, 2020	Q2, 2020	Baseline	Rolling	Q3, 2019	Q4, 2019	Q1, 2020	Q2, 2020	Baseline	Rolling	Q3, 2019	Q4, 2019	Q1, 2020	Q2, 2020
Auckland	97	96	95	97	95	98	94	95	88	98	100	98	93	96	90	96		99
Bay of Plenty	88	100	100	99	100		87	100	100	99	100				98	100	100	
Canterbury	88	100	100	100	100	100	76	100	100	99	100	100	65	95	96	95	92	96
Capital & Coast	86	93	88	96	90	96	91	96	90	100	98	96	94	90	90	86	86	96
Counties Manukau	99	99	99	99	99	99	99	100	100	100	100	100	94	97	96	98	96	97
Hauora Tairāwhiti	85	84	80	82	88	87	89	86	80	84	93	88			83			79
Hawke's Bay			100	100			81	95	93	97	94				98	96		
Hutt Valley			89	98				96	93	97	96				90	100		
Lakes		89	70	90	98	100		88	70	96	89	100		91	76	92	96	100
MidCentral	95				100	100	87				100	98	85					98
Nelson Marlborough	57				100		87				91		66		76		48	
Northland		99	100	98	98	100	79	97	100	97	96	95		95	92	94	98	94
South Canterbury										89								
Southern			100	98		97	93	98	98	100		96		100				100
Taranaki					95	100					80	76						
Waikato	97				99		92				99							94
Wairarapa	96			100			99			100						100		
Waitematā	83	97		97	98		86	98		100	95		91			98		
West Coast			92		98				96		96				82		96	
Whanganui			93	98					93	98					86			
New Zealand	90	97	96	98			89	97	95	98			84	94	93	96		

For more information about rounding and colouring, see the note.

**Baseline** = the average of the first 4 quarters of the programme from Q3, 2016 to Q2, 2017.

**Rolling** = the average of the latest 4 quarters: Q3, 2019 to Q2, 2020.

- Fewer than 50 observations
- Less than 75 percent
- Between 75 percent and the target
- Target achieved

The safe surgery quality and safety domain includes a start-of-list briefing measure to reinforce the importance of the briefing as a safe surgery intervention. The measure is described as, 'Was a briefing including all three clinical teams done at the start of the list?' There is no specific target for this part of the measure; the aim is to have all 20 DHBs increasingly undertaking and reporting briefings over time.

Figure 15 shows, in quarter 2, 2020, 13 DHBs reported that a start-of-list briefing was happening. There has been a general increase observed over time. The Safe Surgery NZ programme team continues to work with DHB auditing teams to promote briefings and improve data submission so the report better matches practice in DHBs.

Figure 15: Briefings – the number of times a briefing, including all three clinical teams, was done at the start of the list

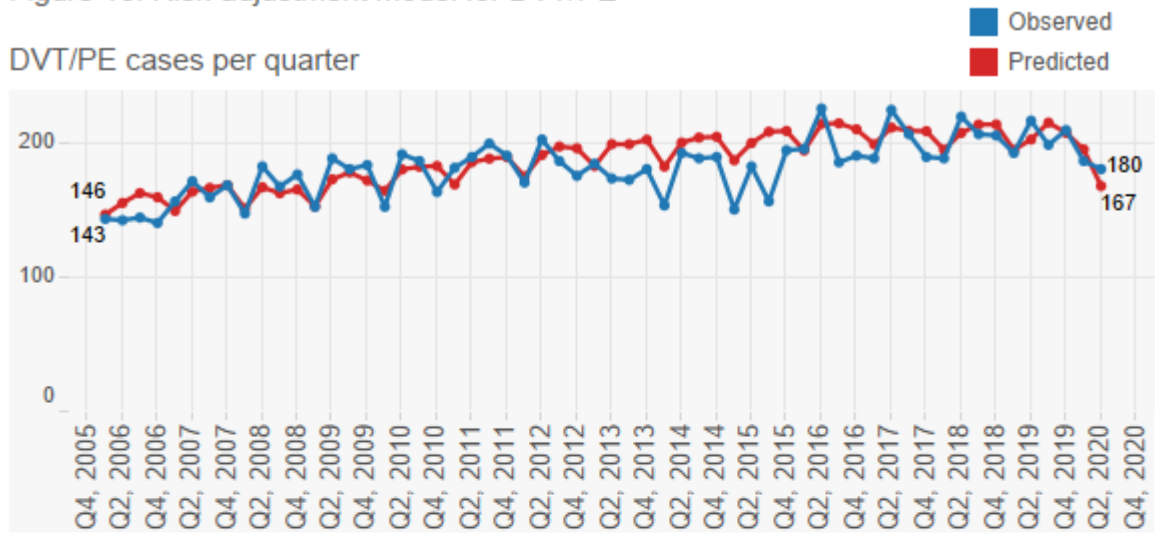
	2017		2018				2019				2020	
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Auckland			4	1	3	8	2	1	62	25	15	25
Bay of Plenty	20	11	15	11	16	17	7	13	12	12	4	
Canterbury	1								1			1
Capital & Coast		6	3									
Counties Manukau	311	462	496	531	761	875	790	873	787	637	665	691
Hauora Tairāwhiti									50	33	35	31
Hawke's Bay	7											
Hutt Valley	14						5	4	4	2	2	2
Lakes	12	11	22	15	8	5	7	20	22	9	9	14
MidCentral	2	2			2	2	1	1	15	18	34	28
Nelson Marlborough			6									12
Northland	18	6	5	7	12	26	18	20	16	26	25	17
South Canterbury			2				5	2	6	14	6	8
Southern	13	5			11	5	6	3	5	2	5	29
Taranaki	3											
Waikato	1		7	2					1	42	81	35
Wairarapa		3		2	9	6	26	32	15	25	5	
Waitematā		10	36	23	13	13	27	21	15	15	14	5
West Coast	12	9	12	14	9	13	6		1	8	18	
Whanganui					5	5	6	12	26	15	11	5

The rates of postoperative deep vein thrombosis/pulmonary embolism (DVT/PE) is the outcome marker for safe surgery. Rates have fluctuated over time. To understand the factors driving the changes and to provide risk-adjusted outcomes in the monitoring and improvement of surgical QSMs, we have developed a risk-adjustment model for this outcome marker.

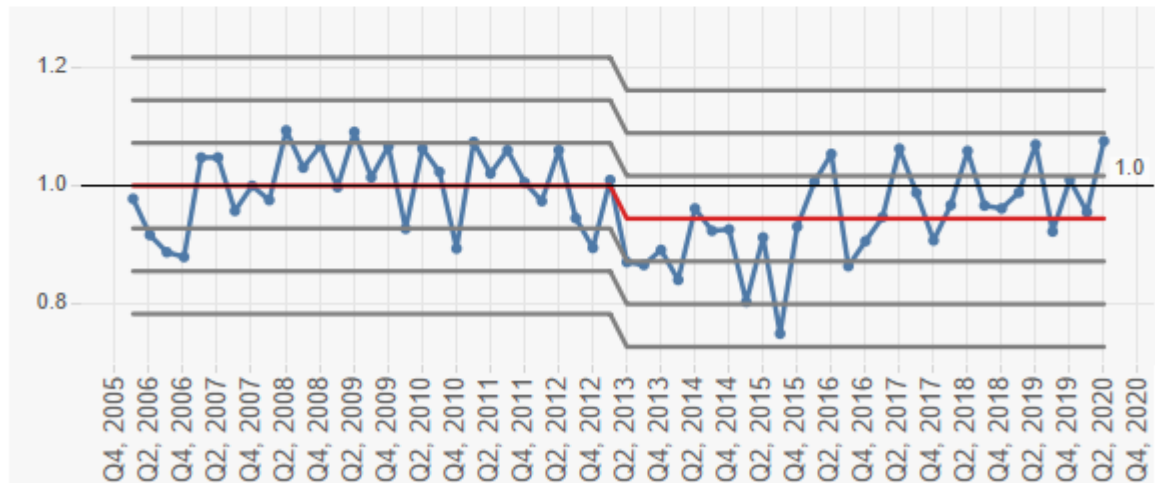
The model identifies how likely patients being operated on were to develop DVT/PE based on factors such as their condition, health history and the operation being undertaken. From this, we calculated how many patients would be predicted to develop DVT/PE based on historic trends. We then compared how many patients actually developed DVT/PE to create an observed/expected (O/E) ratio. If the O/E ratio is more than 1 then there are more DVT/PE cases than expected, even when patient risk is taken into account. A ratio of less than 1 indicates fewer DVT/PE cases than expected.

Figure 16 shows the DVT/PE risk-adjustment model results in two charts. The O/E ratio control chart shows there were 11 consecutive quarters in which the observed numbers were below the expected numbers since quarter 2, 2013. This indicates a statistically significant downwards shift, taking into account the increasing number of high-risk patients treated by hospitals and more complex procedures undertaken by hospitals. Over the past four years, a higher number of cases of DVT/PE have been observed in the second quarter.

Figure 16: Risk-adjustment model for DVT/PE



Control chart, O/E ratio per quarter



## Electronic medicine reconciliation

This quality and safety domain focuses on medicine reconciliation where the process is supported with electronic data capture. Medicine reconciliation is a process by which health professionals accurately document all medicines a patient is taking and their adverse reactions history (including allergy). The information is then used during the patient's transitions in care. An accurate medicines list can be reviewed to check the medicines are appropriate and safe. Medicines that should be continued, stopped or temporarily stopped can be documented on the list. Reconciliation reduces the risk of medicines being:

- omitted
- prescribed at the wrong dose
- prescribed to a patient who is allergic
- prescribed when they have the potential to interact with other prescribed medicines.

The introduction of electronic medicine reconciliation (eMedRec) allows reconciliation to be done more routinely, including at discharge. There is a national programme to roll out eMedRec throughout the country. Figures 17 and 18 show there are six DHBs that have implemented the system to date. Further uptake of eMedRec is limited until the IT infrastructure is improved in each DHB hospital.

Figure 17: Structure marker, implementation of eMedRec

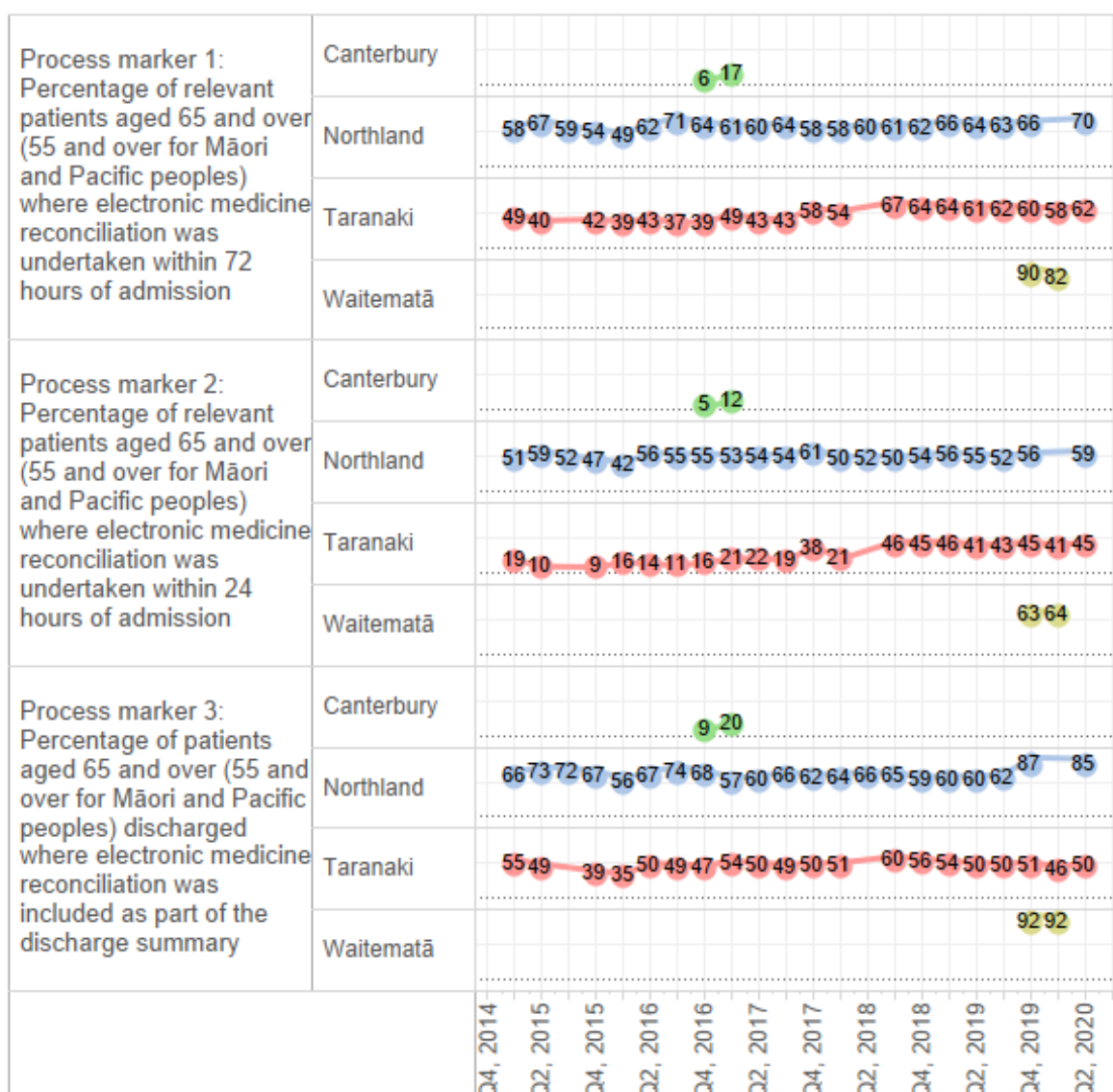
DHB	Status
Auckland	Implemented
Canterbury	Implemented
Counties Manukau	Implemented
Northland	Implemented
Taranaki	Implemented
Waitematā	Implemented
Bay of Plenty	Not implemented
Capital & Coast	Not implemented
Hauora Tairāwhiti	Not implemented
Hawke's Bay	Not implemented
Hutt Valley	Not implemented
Lakes	Not implemented
MidCentral	Not implemented
Nelson Marlborough	Not implemented
South Canterbury	Not implemented
Southern	Not implemented
Waikato	Not implemented
Wairarapa	Not implemented
West Coast	Not implemented
Whanganui	Not implemented

Figure 18: Structure markers, eMedRec implementation

Structure marker	Auckland	Canterbury	Counties Manukau	Northland	Taranaki	Waitematā
Structure 1: eMedRec implemented anywhere in the DHB (yes/no)	Yes	Yes	Yes	Yes	Yes	Yes
Structure 2: Number and percentage of relevant wards with eMedRec implemented	32	60	29	7	7	34
	100%	100%	97%	68%	58%	90%

Within the six DHBs that have implemented eMedRec, only Canterbury, Northland, Taranaki and Waitematā DHB hospitals are reporting their process markers. Figure 19 shows the process marker change over time for Northland and Taranaki DHBs. Further work is being undertaken on refining and agreeing the eMedRec marker definitions. Once this has been achieved the other DHB hospitals using eMedRec will report their process markers. The eMedRec measures have now been accepted by the group and the information is [on our website](#).

Figure 19: eMedRec process markers



## Safe use of opioids

This is the fourth time we have reported the safe use of opioids QSM.

Opioid medicines (morphine, oxycodone, fentanyl, methadone, tramadol and codeine) are high-alert medicines, which are excellent at controlling pain but have a number of unintended side-effects (eg, constipation, nausea and vomiting, and urinary retention). Opioids can also cause serious harm when given in high doses, or in individuals who are at higher risk (eg, opioid-induced ventilatory impairment [OIVI] and cardiac arrest).

In response to these concerns, the Commission sponsored an 18-month formative collaborative from October 2014. The collaborative was aimed at building DHB and private hospital engagement and capacity to identify interventions to reduce opioid-related harm.

This work contributed to the development of a best-practice care bundle approach to decreasing opioid-related harm that includes interventions to reduce OIVI and opioid-induced constipation.



## Outcome measure: Opioid-related harm for surgical episode of care<sup>4</sup>

The outcome measure is taken from DHB NMDS data submitted to the Ministry of Health. The measure will be used over time to determine whether improvements to the monitoring and use of opioids improve patient outcomes through reduced harm.

Figure 20 shows the percentage of surgical admission episodes with opioid-related harm. The national figure for this measure was a rate of 0.54 percent.

Please note this outcome measure **is not directly comparable** between DHBs. The NMDS data is derived from DHB coding. While the coding practices within a DHB are standardised and sustainable, documentation and coding practices between DHBs may not be consistent. Therefore, the outcome measure must only be used to monitor changes over time **within a single DHB**.

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<sup>4</sup> A surgical episode of care. Opioid-related harm events are reported for all surgical patients in hospitals for the reporting quarter. Admissions to surgical services are treated as a single, continuous event or 'episode of care'. Events are joined if they overlap. If an event end date is the same as an event start date, then the two events are joined. The episode start date is the first surgical admission starting date. The episode end date is the last event admission end date. So, if a patient is transferred between surgical wards for the same admission this is counted as a single episode of care.

Figure 20: Opioid-related harm for surgical episodes of care, percent

Auckland	0.51	0.60	0.57	1.06
Bay of Plenty	0.29	0.57	0.35	0.45
Canterbury	0.41	0.25	0.32	0.43
Capital & Coast	0.68	0.46	0.46	0.56
Counties Manukau	0.31	0.38	0.59	0.62
Hauora Tairāwhiti	0.63	0.68	0.35	0.39
Hawke's Bay	0.47	1.05	0.31	0.63
Hutt Valley	0.21	0.34	0.35	0.29
Lakes	0.38	0.27	0.28	0.30
MidCentral	0.05	0.05	0.11	0.36
Nelson Marlborough	0.38	0.29	0.28	0.56
Northland	0.32	0.21	0.19	0.22
South Canterbury	0.52	0.79	0.74	0.18
Southern	0.59	1.01	0.43	0.60
Taranaki	0.06	0.18	0.19	0.37
Waikato	0.37	0.29	0.32	0.41
Wairarapa	0.21	0.18	0.20	0.00
Waitematā	0.45	0.35	0.59	0.48
West Coast	0.63	1.02	0.00	0.37
Whanganui	0.19	0.55	0.12	0.27
New Zealand	0.41	0.44	0.41	0.54
	Q3, 2019	Q4, 2019	Q1, 2020	Q2, 2020