PUBLIC HEALTH SERVICES

Tasmanian Acute Public Hospitals

Healthcare Associated Infection Surveillance Report

Report 29 – Quarter 1 2016

Department of Health and Human Services

Tasmanian Government

Tasmanian Acute Public Hospitals Healthcare Associated Infection Surveillance Report

Public Health Services

Department of Health and Human Services, Tasmania

Published 2016

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Suggested reference: Wilson, F., Anderson, T., Wells, A. (2016). Tasmanian Acute Public Hospitals Healthcare Associated Infection Report No 29 – Quarter 1 2016. Hobart: Department of Health and Human Services.

Peer reviewed and approved by the Tasmanian Healthcare Associated Infection Advisory Committee and the Acting Director of Public Health, DHHS Tasmania.

Notes

Data from previous reports should not be relied upon. Use the most up to date report when citing data.

Tasmanian Infection Prevention and Control

Public Health Services

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Executive summary

This report quarterly report provides an overview of the Tasmanian acute public hospitals' healthcare associated infection surveillance for quarter one, 2016. The TIPCU website (www.dhhs.tas.gov.au/tipcu) contains details of the surveillance program, including the rationale for the indicators surveyed and the methodologies used in data collection, validation and analysis.

Any form of comparison between hospitals should be done with caution because data are not adjusted for patient characteristics that vary between hospitals. Further, the relatively small Tasmanian population and small number of events can result in volatility of rates from time to time. The raw data in the appendices illustrate this.

This report contains the following findings.

- The rate of healthcare associated *Staphylococcus aureus* bacteraemia (SAB) remains low.
- The number and rate of 'hospital identified *Clostridium difficile* infection (CDI)' remains stable while the number and rate of 'healthcare associated-healthcare facility onset (HCA-HCF) CDI' is the lowest in six years.
- The numbers of new isolates of VRE remains high in comparison to quarters prior to Q3 2015.
- The overall Tasmanian public hospital hand hygiene compliance rate is above the National Benchmark.

Staphylococcus aureus bacteraemia (SAB)

Staphylococcus aureus, a common cause of serious healthcare associated bloodstream infection, causes significant patient morbidity and has an estimated mortality of around 25-30 per cent. Many healthcare associated *Staphylococcus aureus* bloodstream infections (SAB) are preventable. *Staphylococcus aureus* bacteraemia was made a notifiable condition in Tasmania in 2008 pursuant to the *Public Health Act 1997*. Tasmania is the first and only Australian jurisdiction to introduce this measure.

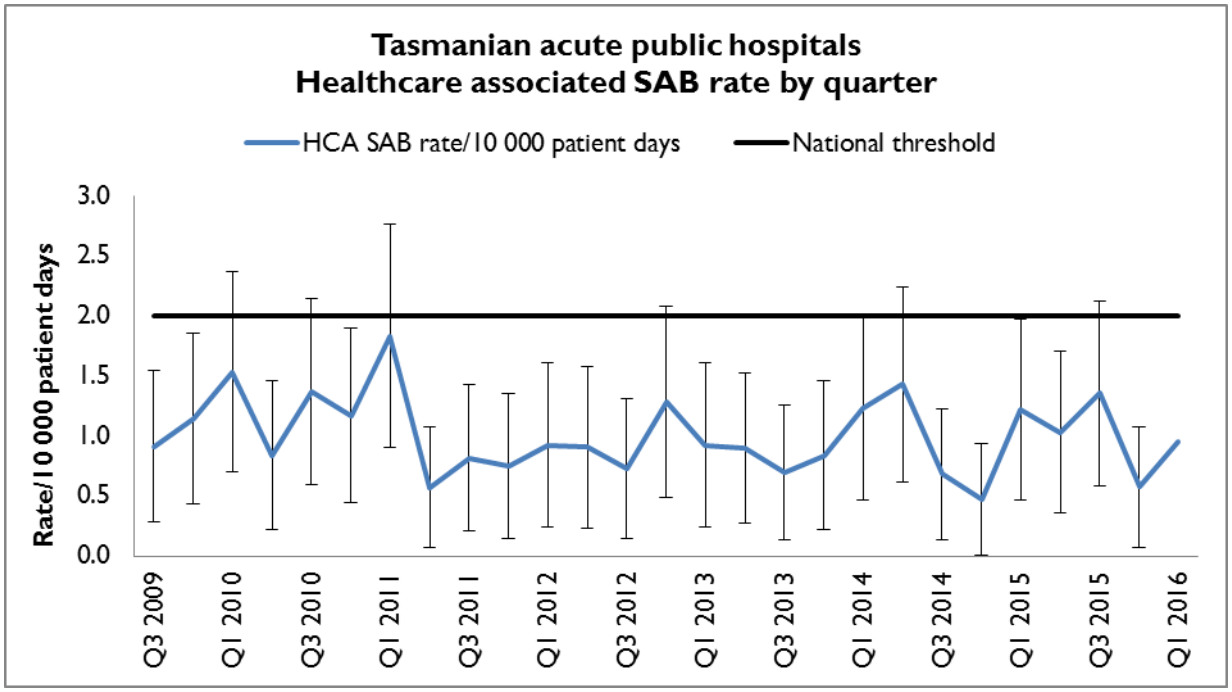
Surveillance of SAB is carried out in Tasmania using the nationally agreed surveillance definitions published by the Australian Commission on Safety and Quality in Health Care (ACSQHC). Under this definition a SAB is defined as healthcare associated if the patient's first SAB positive blood culture was collected either >48 hours after hospital admission or <48 hours after discharge (Criterion A) **OR** ≤48 hours after hospital admission and one of four key clinical healthcare related criteria was met (Criterion B).

The National Healthcare Agreement (2011) target is no more than two HCA SAB per10 000 patient days.

Tasmanian rates

Figure 1 presents the Tasmanian combined acute public hospital rates with 95% confidence intervals, of healthcare associated *Staphylococcus aureus* bacteraemia (HCA SAB) by quarter.

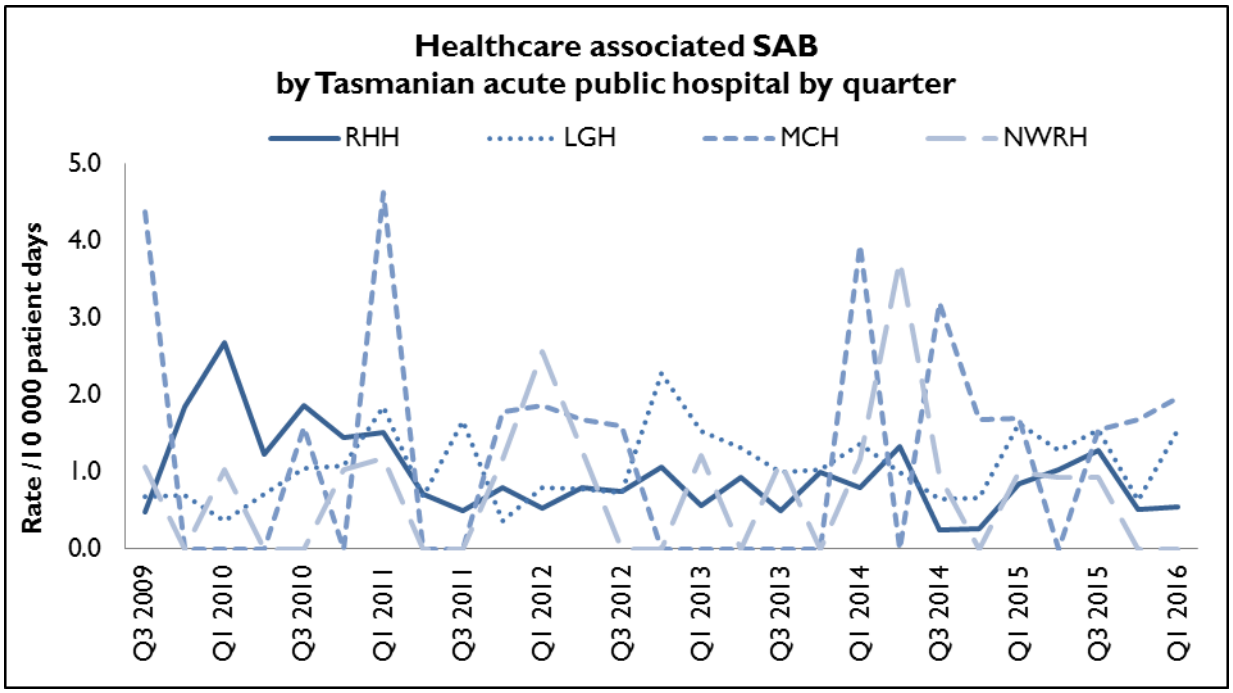
Figure 1 Healthcare associated *Staphylococcus aureus* bacteraemia rate by quarter



Hospital rates

Figure 2 presents the individual acute public hospitals rates of healthcare associated *Staphylococcus aureus* bacteraemia. This information is also contained in tables within the appendix.

Figure 2 Healthcare associated *Staphylococcus aureus* bacteraemia - rate by quarter



Summary

- The rate of healthcare associated *Staphylococcus aureus* bacteraemia for Q1 2016 was 1.0 per 10 000 patient days (95% CI 0.3-1.6).
- Both the individual hospitals' and the quarterly Tasmanian combined acute public hospital HCA SAB rates are less than the National Healthcare Agreement target of no more than two HCA SAB per 10 000 patient days.

Clostridium difficile infection

Clostridium difficile infection (CDI) is a bowel infection caused by the bacterium *Clostridium difficile* and is a common cause of healthcare associated diarrhoea. CDI causes significant patient morbidity and mortality and can result in increased hospital stays and costs. Factors that may contribute to higher CDI rates include the overuse of antibiotics, ineffective infection control processes and suboptimal levels of environmental cleanliness.

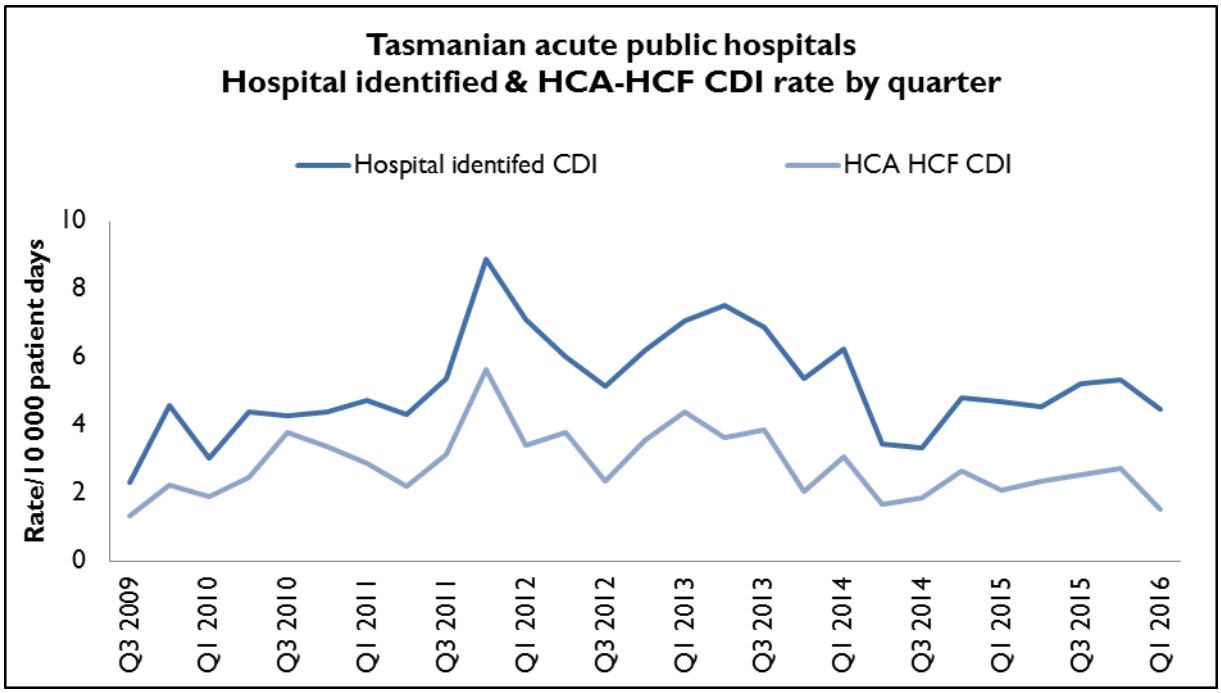
Surveillance of CDI in Tasmania uses the ACSQHC's nationally agreed surveillance definitions. **Hospital identified CDI** are CDI infections identified in a hospital; this category includes healthcare facility and community associated infections.

Healthcare associated – healthcare facility onset (HCA-HCF) CDI are a sub-group of hospital identified cases. This category only includes infections that occurred 48 hours or more after a patient was admitted to hospital. The HCA – HCF rate excludes people who present to hospital with symptoms of CDI and/or develop symptoms within two days of admission.

Tasmanian rates

Figure 3 presents the Tasmanian combined acute public hospital rates of hospital identified CDI and HCA-HCF CDI by quarter.

Figure 3 Hospital identified and HCA-HCF CDI – rate by quarter



Hospital rates

Figure 4 and Figure 5 presents the individual acute public hospital rates of **hospital identified CDI** and **healthcare associated – healthcare facility onset (HCA-HCF) CDI** by quarter**.**

Figure 4 Hospital identified CDI by quarter

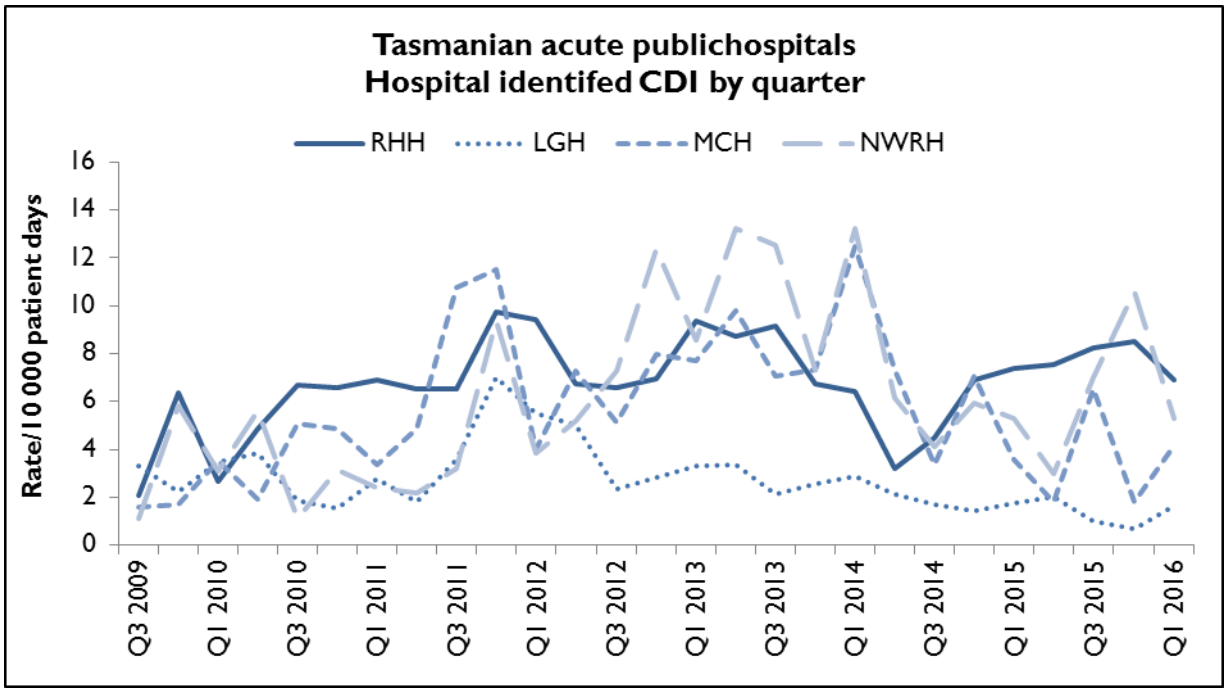
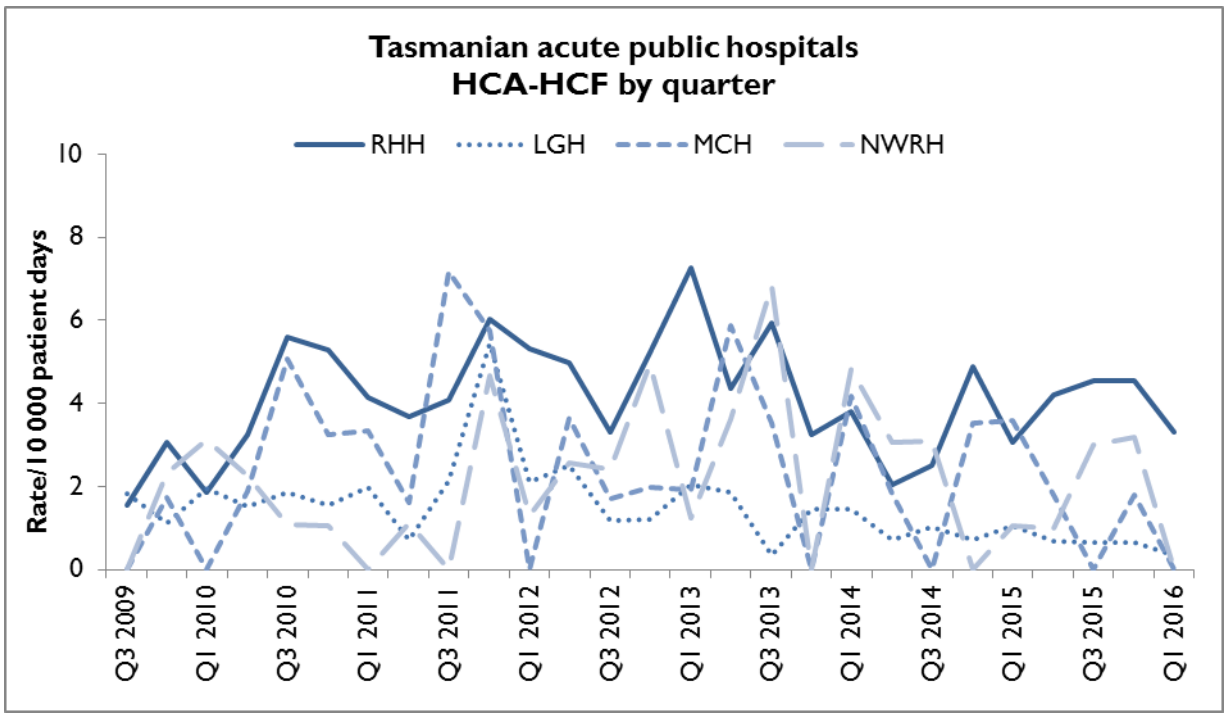


Figure 5 HCA-HCF CDI by quarter



Summary

- The rate of hospital identified CDI for Q1 2016 was 4.5 per 10 000 patient days (95%CI 3.0-6.0) and the rate of HCA-HCF over the same period was 1.5 per10 000 patient days (95%CI 0.67-2.41).
- The mean (average) rate of hospital identified CDI between for the year 1 April 2015 to 31 March 2016 was 4.9 per 10 000 patient days (95% CI 4.1-5.7) and the mean rate of HCA-HCF CDI over the same period was 2.3 per 10 000 patient days (95% CI 1.8-2.8).
- The number and rate of 'hospital identified *Clostridium difficile* infection (CDI)' remains stable while the number and rate of 'healthcare associated-healthcare facility onset (HCA-HCF) CDI' is the lowest in six years.

Vancomycin resistant enterococcus (VRE)

Enterococci are bacteria normally present in the human gastrointestinal and female genital tract. Enterococci can cause infections of the urinary tract, bloodstream and wounds. Enterococci that have acquired resistance to the antibiotic vancomycin are called vancomycin-resistant enterococci or VRE. VRE infections can be more difficult to treat then those caused by vancomycin sensitive enterococci. Factors believed to contribute to the transmission of VRE in hospitals are ineffective infection control practices, overuse of antibiotics and suboptimal environmental cleanliness.

Identification of VRE is a notifiable condition in Tasmania pursuant to the *Public Health Act 1997*.

The number of people newly identified with VRE within hospitals via either a clinical or screening specimen, does not necessarily reflect that VRE was acquired at that hospital. Numbers of VRE isolates identified can be affected by the amount of screening undertaken by hospitals. Some hospitals may have a more intense screening program and hence may identify more VRE.

The total number of reported cases of people newly identified with VRE includes all new cases identified within Tasmania and includes isolates from public and private hospitals, rural hospitals, GP clinics and long term and residential care facilities.

Figure 6 presents the total of all new VRE screening and clinical isolates identified within Tasmania by quarter for the past six quarters.

Figure 6 New VRE isolates by quarter

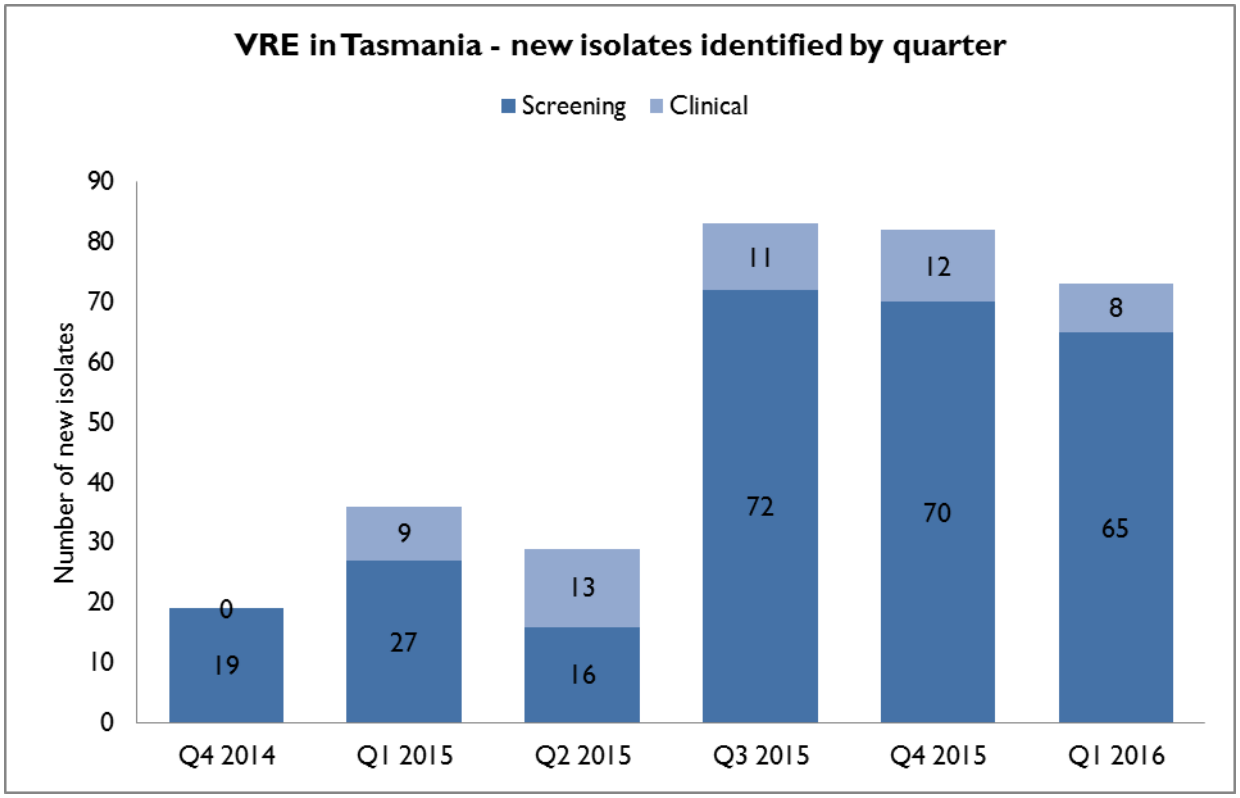
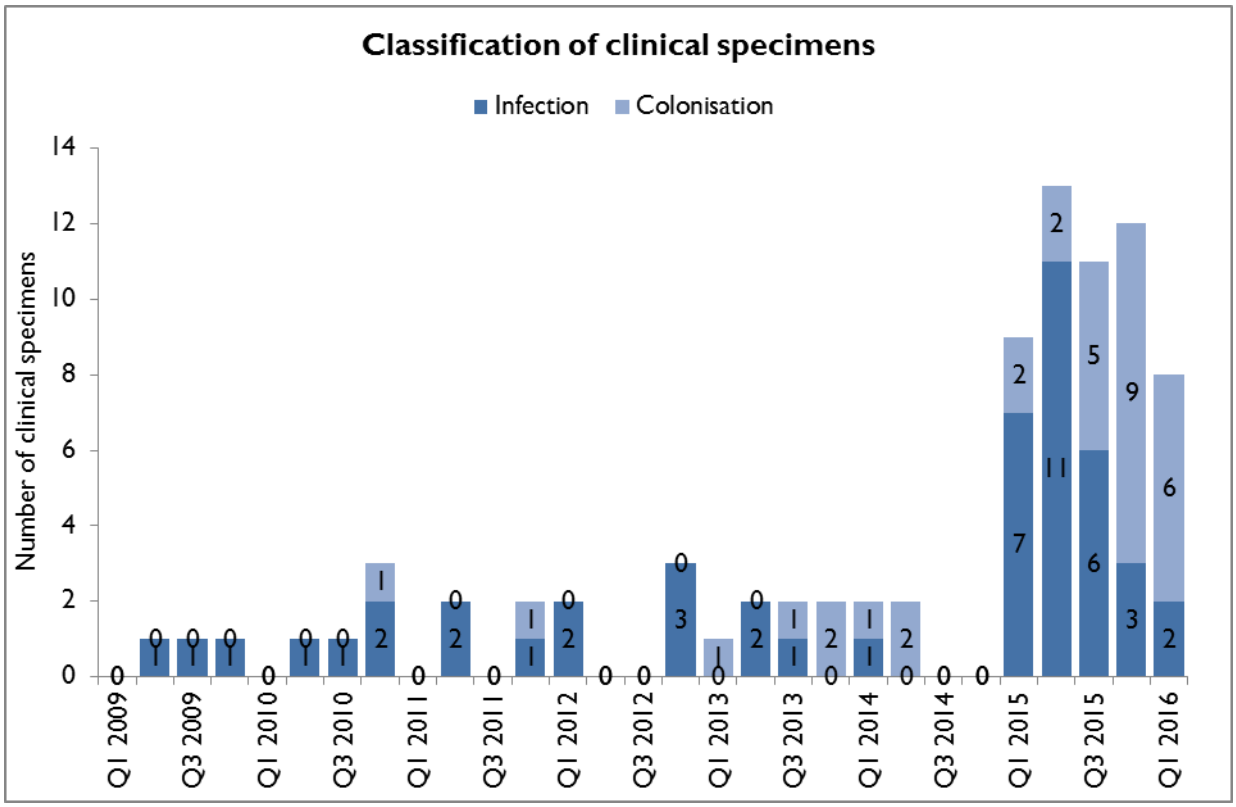


Figure 7 Classification of clinical VRE specimens



Summary

- Over the past 6 quarters (Q4 2014 – Q1 2016), there has been an increase in both colonisations and infections compared to the previous 12 months (Q4 2013 – Q3 2014) with a particularly sharp increase in Q3 and Q4 2015. See Tables 9 – 11 in Appendix 2 for a detailed breakdown of data with increased detection of mostly colonised patients.
- VRE specimens are initially classified as either a screening specimen or a clinical specimen; a positive screening specimen indicates VRE colonisation while VRE found in a clinical specimen can indicate either colonisation or infection.
- The reasons for the overall increase in new VRE isolates appear to be related to transmission of VRE amongst hospitalised patients.
- Management of people with VRE in acute hospitals includes using Contact Precautions – single room with en-suite (if available); staff wear gowns and gloves when caring for the patient, enhanced environmental cleaning and surveillance screening of contacts.

Hand hygiene compliance data

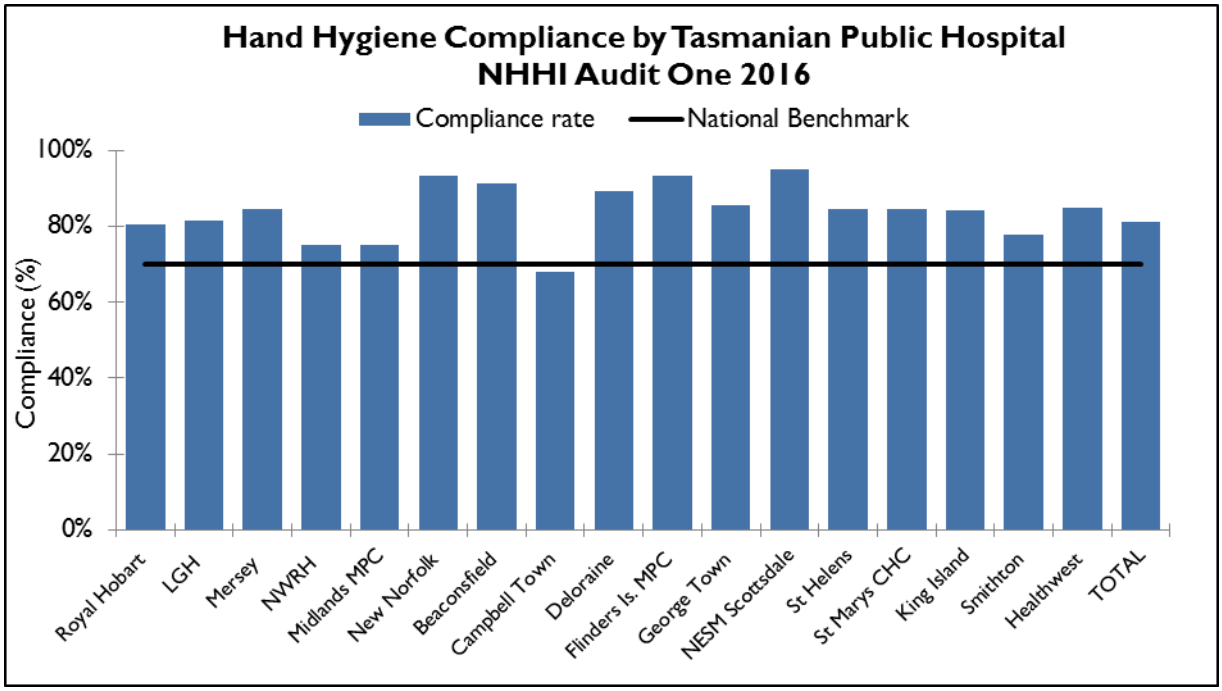
The National Hand Hygiene Initiative was introduced in Tasmania in 2009 to increase healthcare workers hand hygiene compliance and monitor its effectiveness by measuring reductions in HCA SAB. Hand hygiene compliance is monitored by observing if healthcare workers perform hand hygiene at the appropriate times which are known as the '5 Moments for Hand Hygiene'.

These are:

1. **Before** touching a patient
2. **Before** performing a procedure
3. **After** performing a procedure or a body fluid exposure risk
4. **After** touching a patient
5. **After** touching a patients surroundings

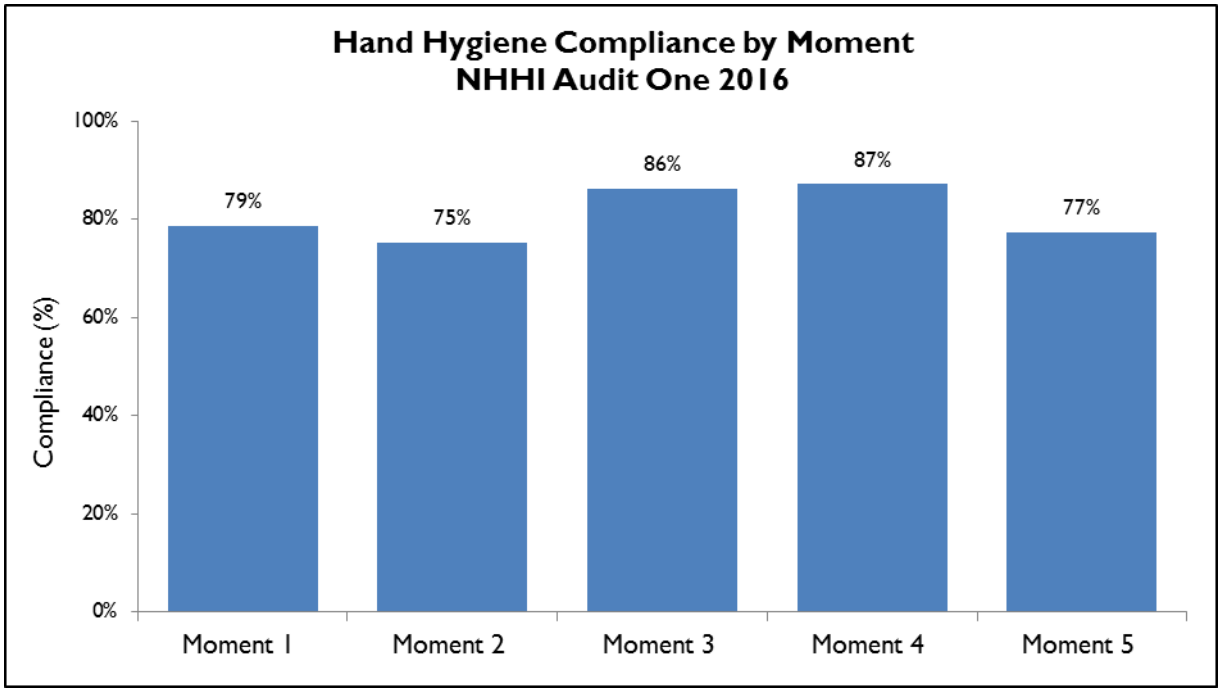
Tasmanian rates

Figure 8 Hand hygiene compliance in Tasmanian public hospitals



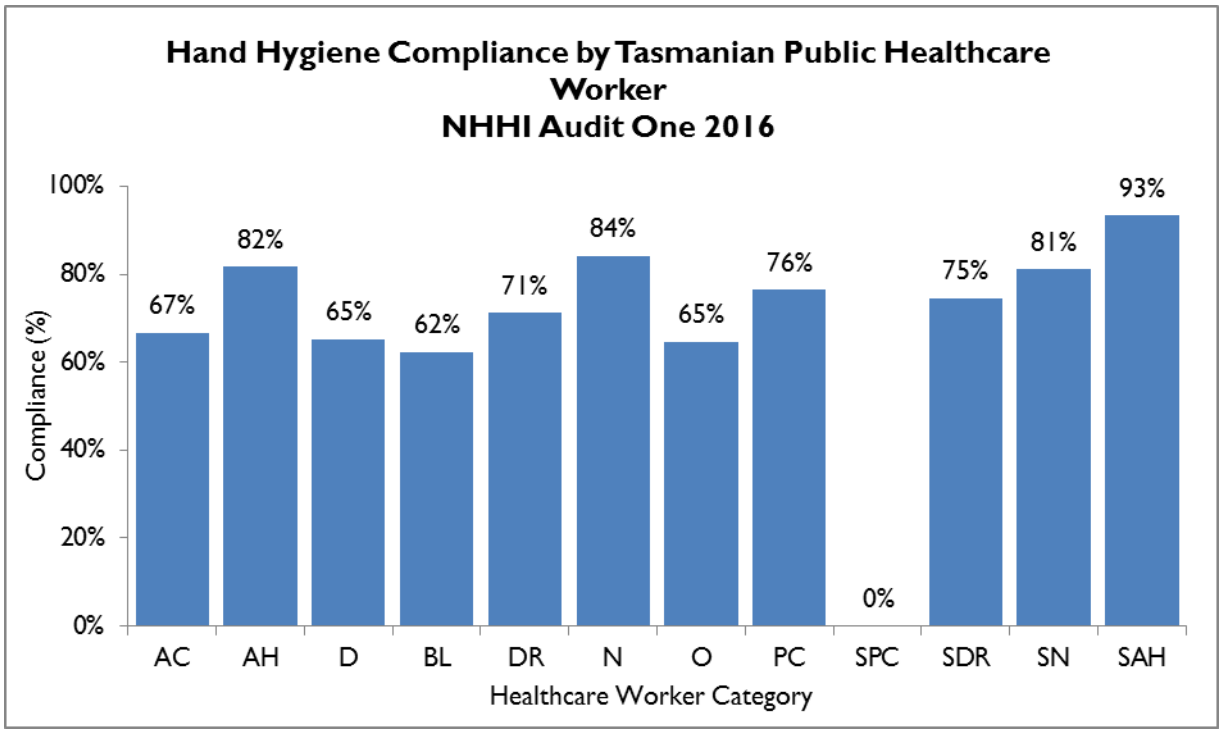
- The National Hand Hygiene Compliance Benchmark is 70 per cent and this was exceeded by all but one of the individual participating hospitals.
- The hospital with less than 70 per cent compliance had a compliance rate of 68 per cent.
- The overall Tasmanian public hospital rate of 81 per cent compliance was also above the National Benchmark.
- There are differences in the number of hand hygiene moments observed in the acute hospitals versus the rural hospitals and these numbers are presented in the tables in Appendix 2.

Figure 9 Hand hygiene compliance by moment



- Hand hygiene compliance after touching a patient or after performing a procedure (Moments 3 and 4) are significantly higher than hand hygiene compliance before touching a patient, before undertaking a procedure and after touching a patient surroundings (Moments 1 , 2 and 5).

Figure 10 Hand hygiene compliance by healthcare worker



AC	Clerical	DR	Doctor	SPC	Student Personal Carer
AH	Allied Health	N	Nurse/Midwife	SDR	Student Doctor
D	Domestic	O	Other	SN	Student Nurse/Midwife
BL	Invasive Technician	PC	Personal Care Staff	SAH	Student Allied Health

- There are differences in the number of hand hygiene moments observed in each healthcare worker group and these numbers are presented in the tables in Appendix 2.
- The majority of hand hygiene compliance data (72 per cent in the latest report) is collected from nurse-patient interactions with the next highest being doctor-patient interactions (12 per cent).

Acknowledgements

The production of this report is the culmination of data collection, analysis and input from a number of different organisations. In particular, we would like to acknowledge:

- Executive Director of Nursing THS North
- Executive Director of Nursing THS North West
- Executive Director of Nursing THS South
- Launceston General Hospital Infection Prevention and Control Unit
- North West Regional Hospital Infection Control Team
- Mersey Community Hospital Infection Control Team
- Royal Hobart Hospital Infection Prevention and Control Unit
- Microbiology Departments at the Royal Hobart Hospital, Launceston General Hospital and DSPL
- Hand Hygiene Australia
- Communicable Diseases Prevention Unit, Public Health Services
- Contributing Primary Health Sites

Appendix 1

Explanatory notes

What types of healthcare surveillance are done in Tasmania?

TIPCU undertakes surveillance of the following:

- *Staphylococcus aureus* bacteraemia (bloodstream infection).
- *Clostridium difficile* infection (CDI).
- Vancomycin resistant enterococci (VRE).
- Hand hygiene compliance rates.
- Antibiotic utilisation.

What do the rates mean?

The healthcare surveillance data are expressed as a rate or a raw number. SAB and CDI are expressed as a rate per 10 000 patient days, VRE is expressed as a raw number, hand hygiene compliance is expressed as a percentage and antibiotic utilisation is expressed as hospital use measured by defined daily doses, per 1 000 occupied bed days.

What are the definitions for *Clostridium difficile* infection (CDI)?

TIPCU use the national surveillance definitions published by the Australian Commission on Safety and Quality in Health Care (ACSQHC) to classify CDI. TIPCU reports on:

1. **Hospital identified CDI** is defined as a case diagnosed in a patient attending an acute care facility. This includes positive specimens obtained from admitted patients and those attending the emergency department and outpatient departments. This definition excludes patients less than two years old and cases with a positive test within the previous eight weeks.
2. **Healthcare associated – healthcare facility onset CDI** (HCA-HCF CDI) is defined as a patient with CDI symptom onset (or date and time of stool specimen collection if a laboratory system is used) more than 48 hours after admission to a healthcare facility. This definition excludes patients less than two years old and cases with a positive test within the previous eight weeks.

What are the definitions for healthcare associated *Staphylococcus aureus* bacteraemia (SAB)?

Criterion A the patient's first SAB blood culture was collected more than 48 hours after hospital admission or less than 48 hours after discharge.

OR

Criterion B the patient's first positive SAB blood culture was collected less than or equal to 48 hours after hospital admission and one or more of the following key clinical criteria was met for the patient-episode of SAB.

Key clinical criteria:

1. SAB is a complication of the presence of an indwelling medical device (eg Intravascular line, haemodialysis vascular access, CSF shunt, urinary catheter).
2. SAB occurs within 30 days of a surgical procedure or 365 days for surgically implanted devices, where the SAB is related to the surgical site.
3. SAB was diagnosed within 48 hours of a related invasive instrumentation or incision.
4. SAB is associated with neutropenia (less 1 x 10^9/L) contributed to by cytotoxic therapy.

What are the definitions for vancomycin resistant enterococci (VRE)?

The definition for VRE is an isolate identified as VRE by an accredited laboratory. TIPCU reports on the total number of people with new isolates of VRE identified in Tasmania per quarter and this number includes all people with new VRE isolates from public and private hospitals, rural hospitals, GP clinics and long term and residential care facilities.

Confidence intervals

Confidence intervals are used to calculate the range in which the true rate probably lies. As an example, when looking at the hand hygiene compliance (HHC) data "confidence intervals calculate the range in which the true compliance result lies, based on the data collected and the compliance measured, thus providing an indication of the reliability of the reported HHC level. When only a small number of moments are collected, the confidence interval will be larger, as it is more difficult to establish the true compliance level from a small sample of moments. If a large number of moments are collected the confidence interval will be smaller, meaning the reliability of the result is higher. Hand Hygiene Australia (HHA) calculates 95 per cent confidence intervals, indicating the intervals in which 95 per cent of the time the true compliance level lies." (HHA 2011)

Patient care days

Patient days is the term to explain the total days patients are in hospital. In each of Tasmania's four larger acute public hospitals there are around 330 000 patient care days a year. When a rate is presented as a number per 10 000 patient days this presents the number of infections that occur for every 10 000 patient care days.

Can I compare Tasmanian hospital infection rates?

Each Tasmanian hospital provides different services and has patients with different levels of illness. This affects infection rates. For example, very sick immuno-compromised patients may be more likely to get infections. It is difficult to remove all of the factors outside the control of a hospital that can cause its infection rate to differ from other hospitals.

Other reasons for caution when comparing hospitals include:

- some hospitals may screen patients more than others. This can affect data for CDI and VRE in particular
- hospital laboratories may use different ways of identifying organisms. A laboratory that has a more sensitive way of looking for organisms may find more
- for hand hygiene, rural hospitals are not required to collect as many moments as the four acute public hospitals, so comparisons between rural and acute hospitals are not recommended.

Appendix 2

Staphylococcus aureus bacteraemia (SAB)

Table 1 Tasmanian numbers and rate per 10 000 patient days of HCA-SAB.

Quarter	Total HCA-SAB	Number MSSA	Number MRSA	HCA SAB Rate
Q3 2009	8	7	1	0.9
Q4 2009	10	10	0	1.1
Q1 2010	13	13	0	1.5
Q2 2010	7	7	0	0.8
Q3 2010	12	11	1	1.4
Q4 2010	10	7	3	1.2
Q1 2011	15	13	2	1.8
Q2 2011	5	5	0	0.6
Q3 2011	7	7	0	0.8
Q4 2011	6	4	2	0.8
Q1 2012	7	6	1	0.9
Q2 2012	7	6	1	0.9
Q3 2012	6	6	0	0.7
Q4 2012	10	9	1	1.3
Q1 2013	7	7	0	0.9
Q2 2013	8	7	1	0.9
Q3 2013	6	6	0	0.7
Q4 2013	7	7	0	0.8
Q1 2014	10	9	1	1.2
Q2 2014	12	10	2	1.4
Q3 2014	6	6	0	0.7
Q4 2014	4	4	0	0.5
Q1 2015	10	9	1	1.2
Q2 2015	9	7	2	1.0
Q3 2015	12	10	2	1.4
Q4 2015	5	4	1	0.6
Q1 2016	8	6	2	1.0

Table 2 Royal Hobart Hospital numbers and rates per10 000 patient days of HCA-SAB

Quarter	Total HCA-SAB	Number MSSA	Number MRSA	HCA SAB Rate
Q3 2009	2	2	0	0.5
Q4 2009	8	8	0	1.8
Q1 2010	11	11	0	2.7
Q2 2010	5	5	0	1.2
Q3 2010	8	7	1	1.9
Q4 2010	6	5	1	1.4
Q1 2011	6	4	2	1.5
Q2 2011	3	3	0	0.7
Q3 2011	2	2	0	0.5
Q4 2011	3	2	1	0.8
Q1 2012	2	2	0	0.5
Q2 2012	3	3	0	0.8
Q3 2012	3	3	0	0.8
Q4 2012	4	4	0	1.1
Q1 2013	2	2	0	0.6
Q2 2013	4	4	0	0.9
Q3 2013	2	2	0	0.5
Q4 2013	4	4	0	1.0
Q1 2014	3	3	0	0.8
Q2 2014	5	4	1	1.3
Q3 2014	1	1	0	0.3
Q4 2014	1	0	0	0.3
Q1 2015	3	2	1	0.8
Q2 2015	4	4	0	1.0
Q3 2015	5	5	0	1.3
Q4 2015	2	2	0	0.5
Q1 2016	2	2	0	0.5

Table 3 Launceston General Hospital numbers and rates per10 000 patient days of HCA-SAB

Quarter	Total HCA-SAB	Number MSSA	Number MRSA	HCA SAB Rate
Q3 2009	2	1	1	0.7
Q4 2009	2	2	0	0.7
Q1 2010	1	1	0	0.4
Q2 2010	2	2	0	0.7
Q3 2010	3	3	0	1.0
Q4 2010	3	1	2	1.1
Q1 2011	5	5	0	1.8
Q2 2011	2	2	0	0.7
Q3 2011	5	5	0	1.7
Q4 2011	1	1	0	0.4
Q1 2012	2	1	1	0.8
Q2 2012	2	2	0	0.8
Q3 2012	2	2	0	0.7
Q4 2012	6	5	1	2.3
Q1 2013	4	4	0	1.5
Q2 2013	4	3	1	1.3
Q3 2013	3	3	0	1.0
Q4 2013	3	3	0	1.0
Q1 2014	4	4	0	1.4
Q2 2014	3	2	1	1.0
Q3 2014	2	2	0	0.6
Q4 2014	2	2	0	0.7
Q1 2015	5	5	0	1.6
Q2 2015	4	2	2	1.3
Q3 2015	5	3	2	1.5
Q4 2015	2	1	1	0.6
Q1 2016	5	3	2	1.6

Table 4 Mersey Community Hospital numbers and rates per10 000 patient days of HCA-SAB

Quarter	Total HCA-SAB	Number MSSA	Number MRSA	HCA SAB Rate
Q3 2009	3	3	0	4.4
Q4 2009	0	0	0	0.0
Q1 2010	0	0	0	0.0
Q2 2010	0	0	0	0.0
Q3 2010	1	1	0	1.6
Q4 2010	0	0	0	0.0
Q1 2011	3	3	0	4.6
Q2 2011	0	0	0	0.0
Q3 2011	0	0	0	0.0
Q4 2011	1	0	1	1.8
Q1 2012	1	1	0	1.9
Q2 2012	1	1	0	1.7
Q3 2012	1	1	0	1.6
Q4 2012	0	0	0	0.0
Q1 2013	0	0	0	0.0
Q2 2013	0	0	0	0.0
Q3 2013	0	0	0	0.0
Q4 2013	0	0	0	0.0
Q1 2014	2	2	0	3.9
Q2 2014	0	0	0	0.0
Q3 2014	2	2	0	3.2
Q4 2014	1	1	0	1.7
Q1 2015	1	1	0	1.7
Q2 2015	0	0	0	0.0
Q3 2015	1	1	0	1.5
Q4 2015	1	1	0	1.7
Q1 2016	1	1	0	2.0

Table 5 North West Regional Hospital numbers and rates per10 000 patient days of HCA-SAB.

Quarter	Total HCA-SAB	Number MSSA	Number MRSA	HCA SAB Rate
Q3 2009	1	1	0	1.1
Q4 2009	0	0	0	0.0
Q1 2010	1	1	0	1.0
Q2 2010	0	0	0	0.0
Q3 2010	0	0	0	0.0
Q4 2010	1	1	0	1.0
Q1 2011	1	1	0	1.2
Q2 2011	0	0	0	0.0
Q3 2011	0	0	0	0.0
Q4 2011	1	1	0	1.2
Q1 2012	2	2	0	2.6
Q2 2012	1	0	1	1.3
Q3 2012	0	0	0	0.0
Q4 2012	0	0	0	0.0
Q1 2013	1	1	0	1.2
Q2 2013	0	0	0	0.0
Q3 2013	1	1	0	1.1
Q4 2013	0	0	0	0.0
Q1 2014	1	0	1	1.2
Q2 2014	4	4	0	3.7
Q3 2014	1	1	0	1.0
Q4 2014	0	0	0	0.0
Q1 2015	1	1	0	1.0
Q2 2015	1	1	0	0.9
Q3 2015	1	1	0	0.9
Q4 2015	0	0	0	0.0
Q1 2016	0	0	0	0.0

Clostridium difficile infection (CDI)

Table 6 Tasmanian numbers and rates per10 000 patient days of CDI

Quarter	Total hospital identified CDI	Rate	Total HCA HCF	Rate
Q3 2009	19	2.3	11	1.4
Q4 2009	37	4.6	18	2.2
Q1 2010	24	3.0	15	1.9
Q2 2010	34	4.4	19	2.5
Q3 2010	34	4.3	30	3.8
Q4 2010	35	4.4	27	3.4
Q1 2011	35	4.7	22	2.9
Q2 2011	35	4.3	18	2.2
Q3 2011	43	5.4	25	3.1
Q4 2011	66	8.9	42	5.6
Q1 2012	50	7.1	24	3.4
Q2 2012	43	6.0	27	3.8
Q3 2012	39	5.1	18	2.4
Q4 2012	45	6.2	26	3.6
Q1 2013	50	7.1	31	4.4
Q2 2013	57	7.5	27	3.6
Q3 2013	55	6.9	31	3.9
Q4 2013	42	5.4	16	2.1
Q1 2014	47	6.3	23	3.1
Q2 2014	27	3.5	13	1.7
Q3 2014	27	3.4	15	1.9
Q4 2014	38	4.8	21	2.7
Q1 2015	36	4.7	16	2.1
Q2 2015	37	4.6	19	2.3
Q3 2015	43	5.2	21	2.6
Q4 2015	43	5.3	22	2.7
Q1 2016	35	4.5	12	1.5

Table 7 Hospital numbers and rates per10 000 patient days of hospital identified CDI

Quarter	Royal Hobart		Launceston General		Mersey Community		NW Regional	
	Total	Rate	Total	Rate	Total	Rate	Total	Rate
Q3 2009	8	2.1	9	3.3	1	1.6	1	1.1
Q4 2009	25	6.4	6	2.2	1	1.7	5	5.8
Q1 2010	10	2.7	9	3.5	2	3.5	3	3.1
Q2 2010	18	4.9	10	3.8	1	1.9	5	5.6
Q3 2010	25	6.7	5	1.9	3	5.1	1	1.1
Q4 2010	25	6.6	4	1.5	3	4.9	3	3.1
Q1 2011	25	6.9	7	2.8	2	3.3	2	2.4
Q2 2011	25	6.5	5	1.8	3	4.9	2	2.2
Q3 2011	24	6.5	10	3.6	6	10.8	3	3.2
Q4 2011	34	9.8	18	7.0	6	11.5	8	9.4
Q1 2012	32	9.4	13	5.5	2	4.0	3	3.9
Q2 2012	23	6.7	12	5.0	4	7.3	4	5.2
Q3 2012	24	6.6	6	2.4	3	5.1	6	7.3
Q4 2012	24	6.9	7	2.8	4	7.9	10	12.3
Q1 2013	31	9.4	8	3.3	4	7.7	7	8.6
Q2 2013	32	8.7	9	3.4	5	9.8	11	13.2
Q3 2013	34	9.1	6	2.1	4	7.0	11	12.5
Q4 2013	25	6.8	7	2.6	4	7.3	6	7.3
Q1 2014	22	6.4	8	2.9	6	12.5	11	13.2
Q2 2014	11	3.2	6	2.1	4	7.3	6	6.1
Q3 2014	16	4.5	5	1.7	2	3.4	4	4.1
Q4 2014	24	6.9	4	1.4	4	7.1	6	5.9
Q1 2015	24	7.4	5	1.7	2	3.6	5	5.3
Q2 2015	27	7.5	6	2.0	1	1.8	3	3.0
Q3 2015	29	8.2	3	1.0	4	6.5	7	7.0
Q4 2015	30	8.5	2	0.7	1	1.8	10	10.6
Q1 2016	23	6.9	5	1.6	2	4.2	5	5.3

Table 8 Hospital numbers and rates per10 000 patient days of HCA-HCF CDI

Quarter	Royal Hobart		Launceston General		Mersey Community		NW Regional	
	Total	Rate	Total	Rate	Total	Rate	Total	Rate
Q3 2009	6	1.6	5	1.8	0	0.0	0	0.0
Q4 2009	12	3.1	3	1.1	1	1.7	2	2.3
Q1 2010	7	1.9	5	1.9	0	0.0	3	3.1
Q2 2010	12	3.3	4	1.5	1	1.9	2	2.2
Q3 2010	21	5.6	5	1.9	3	5.1	1	1.1
Q4 2010	20	5.3	4	1.5	2	3.2	1	1.0
Q1 2011	15	4.1	5	2.0	2	3.3	0	0.0
Q2 2011	14	3.7	2	0.7	1	1.6	1	1.1
Q3 2011	15	4.1	6	2.1	4	7.2	0	0.0
Q4 2011	21	6.0	14	5.4	3	5.8	4	4.7
Q1 2012	18	5.3	5	2.1	0	0.0	1	1.3
Q2 2012	17	5.0	6	2.5	2	3.6	2	2.6
Q3 2012	12	3.3	3	1.2	1	1.7	2	2.4
Q4 2012	18	5.2	3	1.2	1	2.0	4	4.9
Q1 2013	24	7.2	5	2.1	1	1.9	1	1.2
Q2 2013	16	4.4	5	1.9	3	5.9	3	3.6
Q3 2013	22	5.9	1	0.4	2	3.5	6	6.8
Q4 2013	12	3.2	4	1.5	0	0.0	0	0.0
Q1 2014	13	3.8	4	1.4	2	4.2	4	4.8
Q2 2014	7	2.0	2	0.7	1	1.8	3	3.1
Q3 2014	9	2.5	3	1.0	0	0.0	3	3.1
Q4 2014	17	4.9	2	0.7	2	3.5	0	0.0
Q1 2015	10	3.1	3	1.0	2	3.6	1	1.1
Q2 2015	15	4.2	2	0.7	1	1.8	1	1.0
Q3 2015	16	4.5	2	0.7	0	0.0	3	3.0
Q4 2015	16	4.5	2	0.7	1	1.8	3	3.2
Q1 2016	11	3.3	1	0.3	0	0.0	0	0.0

Vancomycin resistant enterococcus (VRE) data

Table 9 VRE isolates identified per quarter within a) acute public hospitals, b) other healthcare settings (private hospitals, rural hospitals, GP clinics and long term and residential care facilities) and c) total Tasmanian isolates.

	RHH	LGH	MCH	NWRH	Other healthcare settings	Total
Q1 2008	11	-	-	-	2	13
Q2 2008	17	6	-	7	3	32
Q3 2008	1	1	-	10	-	12
Q4 2008	3	9	-	5	1	18
Q1 2009	-	4	2	3	-	9
Q2 2009	8	-	4	2	-	14
Q3 2009	1	-	2	1	-	4
Q4 2009	2	2	1	-	1	6
Q1 2010	1	-	1	-	-	2
Q2 2010	4	-	1	-	-	5
Q3 2010	10	-	2	2	-	14
Q4 2010	3	-	3	1	1	8
Q1 2011	-	-	2	1	-	3
Q2 2011	3	1	-	-	4	8
Q3 2011	1	1	-	-	1	3
Q4 2011	3	-	-	-	2	5
Q1 2012	3	2	2	2	1	10
Q2 2012	4	2	-	1	-	7
Q3 2012	3	2	2	-	1	8
Q4 2012	1	7	1	1	2	12
Q1 2013	13	0	3	-	2	18
Q2 2013	8	3	-	1	3	15
Q 3 2013	8	1	-	2	1	12
Q4 2013	5	3	-	3	5	16
Q1 2014	5	-	1	1	1	8
Q2 2014	3	6	1	1	2	13
Q3 2014	1	2	3	2	-	8
Q4 2014	1	5	1	5	7	19
Q1 2015	10	12	2	5	7	36
Q2 2015	5	13	2	1	8	29
Q3 2015	33	17	9	5	19	83
Q4 2015	36	22	0	11	13	82
Q1 2016	28	26	7	4	8	73

Table 10 Classification of VRE isolates – number of screening and clinical specimens; and of clinical specimens that indicate an infection

Quarter	Total VRE	Screening specimens	Clinical specimens	Clinical specimens that indicate an infection
Q1 2009	9	9	0	0
Q2 2009	14	13	1	1
Q3 2009	5	2	3	1
Q4 2009	5	5	0	0
Q1 2010	2	2	0	0
Q2 2010	5	4	1	1
Q3 2010	14	13	1	1
Q4 2010	8	5	3	2
Q1 2011	3	3	0	0
Q2 2011	8	6	2	2
Q3 2011	3	3	0	0
Q4 2011	5	3	2	1
Q1 2012	10	8	2	2
Q2 2012	7	7	0	0
Q3 2012	8	8	0	0
Q4 2012	12	9	3	3
Q1 2013	18	17	1	0
Q2 2013	15	13	2	2
Q3 2013	12	10	2	1
Q4 2013	16	14	2	0
Q1 2014	8	6	2	1
Q2 2014	13	11	2	0
Q3 2014	8	8	0	0
Q4 2014	19	19	0	0
Q1 2015	36	27	9	7
Q2 2015	29	16	13	11
Q3 2015	83	72	11	6
Q4 2015	82	70	12	3
Q1 2016	73	65	8	2

Table 11 Number and site of VRE infections

Quarter	Total VRE Infections	Sterile site	Urine	Other
Q1 2009	0			
Q2 2009	1			1 - wound
Q3 2009	1		1	
Q4 2009	0			
Q1 2010	0			
Q2 2010	1		1	
Q3 2010	1		1	
Q4 2010	2		2	
Q1 2011	0			
Q2 2011	2		2	
Q3 2011	0			
Q4 2011	1			1 - wound
Q1 2012	2		1	1 – abscess
Q2 2012	0			
Q3 2012	0			
Q4 2012	3	1 - tissue	2	
Q1 2013	0			
Q2 2013	2		2	
Q3 2013	1			1 - wound
Q4 2013	0			
Q1 2014	1	1 – pleural fluid		
Q2 2014	0			
Q3 2014	0			
Q4 2014	0			
Q1 2015	7	1 – blood	4	2 - wound
Q2 2015	11	3 - blood 1 - peritoneal fluid	5	1 - drain fluid 1 - wound
Q3 2015	6	1 - blood	5	
Q4 2015	3	1 - tissue		2 – wound
Q1 2016	2	1 - tissue	1	

Hand hygiene compliance data March 2016

Table 12 Hand hygiene compliance rates by Tasmanian hospital and state level

Hospital Name	HH Correctly Performed	HH Moments	Compliance	Lower 95% confidence interval	Upper 95% confidence interval
Royal Hobart	2222	2762	80%	79%	82%
LGH	4121	5049	82%	81%	83%
Mersey	589	696	85%	82%	87%
NWRH	755	1007	75%	72%	78%
Midlands MPC	42	56	75%	62%	84%
New Norfolk	58	62	94%	85%	97%
Beaconsfield	54	59	92%	82%	96%
Campbell Town	34	50	68%	54%	79%
Deloraine	208	233	89%	85%	93%
Flinders Is. MPC	29	31	94%	79%	98%
George Town	84	98	86%	77%	91%
NESM Scottsdale	75	79	95%	88%	98%
St Helens	44	52	85%	72%	92%
St Marys CHC	99	117	85%	77%	90%
King Island	43	51	84%	72%	92%
Smithton	39	50	78%	65%	87%
Healthwest	45	53	85%	73%	92%
TOTAL	**8541**	**10505**	**81.3%**	**81%**	**82%**

Table 13 Tasmanian hand hygiene compliance rates by moment

Moments	HH Correctly Performed	Total HH Moments	Compliance	Lower 95% confidence interval	Upper 95% confidence interval
Moment 1	2333	2967	79%	77%	80%
Moment 2	540	717	75%	72%	78%
Moment 3	848	983	86%	84%	88%
Moment 4	2707	3107	87%	86%	88%
Moment 5	2113	2731	77%	76%	79%
TOTAL	**8541**	**10505**	**81%**	**81%**	**82%**

Table 14 Tasmanian hand hygiene compliance rates by healthcare worker

Staff Type	HH Correctly Performed	HH Moments	Compliance	Lower 95% confidence interval	Upper 95% confidence interval
Clerical	16	24	67%	47%	82%
Allied Health	400	490	82%	78%	85%
Domestic	135	207	65%	59%	71%
Invasive Technician	48	77	62%	51%	72%
Doctor	890	1251	71%	69%	74%
Nurse/Midwife	6345	7545	84%	83%	85%
Other	22	34	65%	48%	79%
Personal care staff	383	501	76%	73%	80%
Student personal care	0	1	0%	0%	0%
Student Doctor	44	59	75%	62%	84%
Student Nurse/Midwife	244	301	81%	76%	85%
Student Allied Health	14	15	93%	70%	99%
TOTAL	**8541**	**10505**	**81%**	**81%**	**82%**