

Tasmanian Acute Public Hospitals Healthcare Associated Infection Surveillance Report

Annual Report (Period ending 30 June 2011)

October 2011

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Notes

- This report does not contain the methodology used to collect the data. Protocols relating to the surveillance programs are published on the TIPCU website, www.dhhs.tas.gov.au/tipcu
- An explanatory document is available on the TIPCU website. This document provides insight into understanding the surveillance report.
- Data from previous reports should not be relied upon. Use the most to date report when quoting/using data.

TASMANIAN INFECTION PREVENTION AND CONTROL UNIT

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Executive Summary

This annual report provides a broad overview that complements the quarterly surveillance data reports that the Tasmanian Infection Prevention and Control Unit (TIPCU) has been publishing since March 2009. 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. These details are not contained in this report but are freely available online should further information be required. In addition, an explanatory document has been developed to accompany this surveillance report.

Any form of comparison between hospitals should be done with extreme caution and direct comparisons are not recommended. Information about how Tasmanian rates compare with those of other Australian states (and internationally), are provided in the Key Points sections of this report. A question and answer document and an explanatory document are also available on the TIPCU website (www.dhhs.tas.gov.au/tipcu). The Appendices in this report contain more detailed information.

Compared to the quarterly reports published by the TIPCU, this report contains some additional detail, such as infection rates by financial year. From this report, the following findings can be made:

- The rate of healthcare associated staphylococcus aureus bacteraemia has decreased since the introduction of the hand hygiene initiative
- The rate of *Clostridium difficile* infection (CDI) has increased in the past few years and is seen in both hospital identified CDI and healthcare associated, healthcare facility onset CDI
- The numbers of persons with VRE continue to remain low
- The rate of hand hygiene compliance has increased significantly over the past two years.



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Progress

A great deal of progress in the area of infection prevention and control has occurred in Tasmanian over the past few years. This can be demonstrated through

- development of a Tasmanian Strategy for the Prevention & Control of healthcare associated infections in Tasmania
- increased infection control support for primary health settings within area health services
- the introduction of a hand hygiene initiative into all hospitals
- the introduction of surveillance programs based on national developments
- surveillance programs that provide timely reporting
- development of a range of guidance and information for healthcare workers and the public on important issues related to healthcare associated infections
- enhanced governance and the introduction of performance indicators for key healthcare associated infections
- development of key state-wide infection prevention and control policies and protocols for those working in the DHHS.
- enhanced interaction with the private healthcare sector and education providers
- increased information for the public, through the TIPCU website and being the first State in Australia to introduce public reporting of healthcare associated infection rates
- provision of enhanced and ongoing training and education provision for those working in primary health and residential and aged care
- infection control initiatives for State-wide and mental health services in the area of infection control
- ongoing involvement with work undertaken by the Australian Commission of Safety & Quality in Healthcare
- work undertaken by the Tasmanian healthcare associated infection advisory committee and steering committee.

Staphylococcus aureus bacteraemia

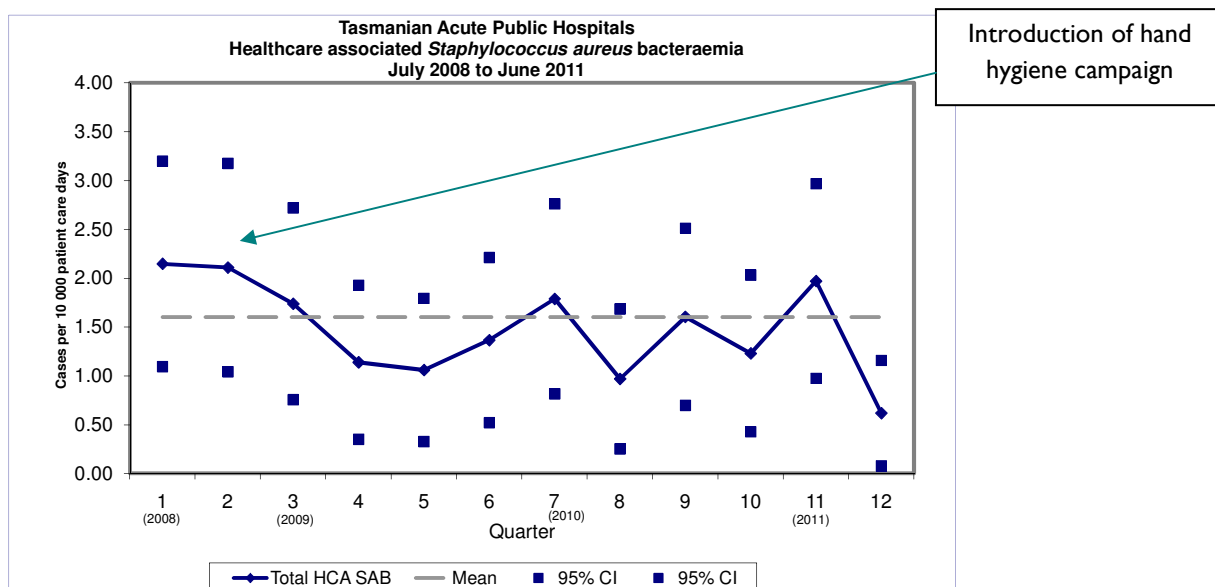
(Bloodstream Infection)

Tasmanian Rates

Figure 1 outlines the Tasmanian rates of Healthcare Associated *Staphylococcus aureus* bacteraemia (all acute public hospitals combined).

The average (mean) rate of healthcare associated *Staphylococcus aureus* bacteraemia between 1st July 2008 and 30th June 2011 is 1.47 per 10 000 patient care days (95% CI 1.22–1.72) or 0.44 per 1000 separations (95% CI 0.36-0.51).

Figure 1 Tasmanian rates of Healthcare Associated *Staphylococcus aureus* bacteraemia

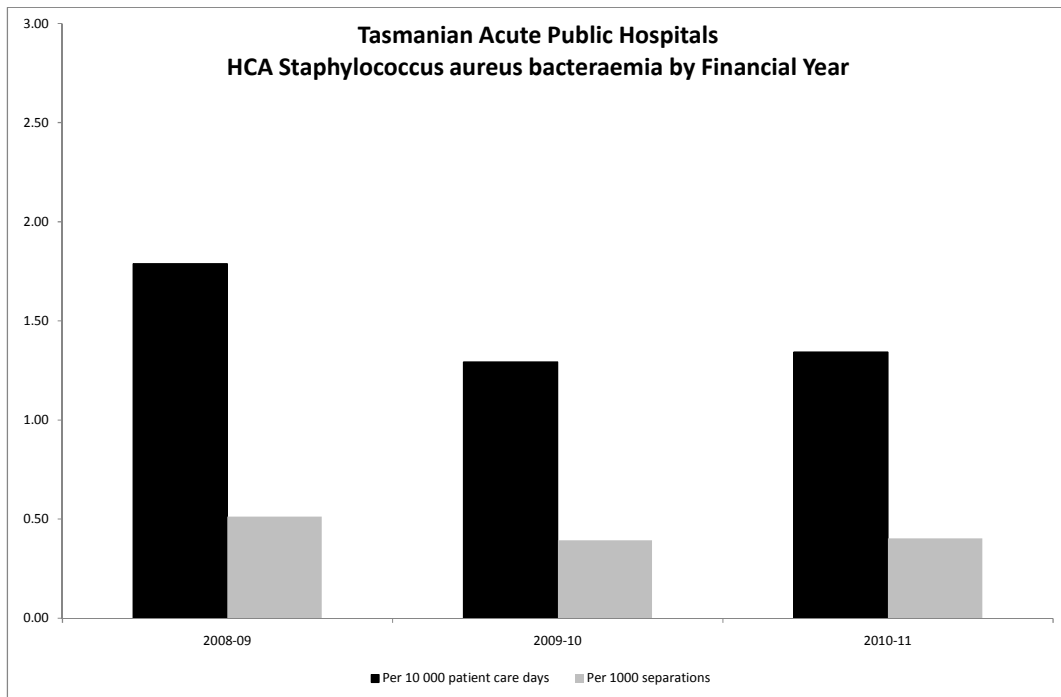


The annual rate of healthcare associated *Staphylococcus aureus* bacteraemia in Tasmanian acute public hospitals for the financial years 1st July 2008 to 30th June 2011 are detailed in Table 1 and Figure 2.

Table 1 – Annual rate of healthcare associated *Staphylococcus aureus* bacteraemia

Year	Rate Healthcare Associated <i>Staphylococcus aureus</i> bacteraemia per 10 000 patient care days	Rate Healthcare Associated <i>Staphylococcus aureus</i> bacteraemia per 1000 separations
2008-2009	1.79	0.51
2009-2010	1.29	0.39
2010-2011	1.34	0.40

Figure 2 Tasmanian rates of Healthcare Associated *Staphylococcus aureus* bacteraemia by financial year



Hospital Rates

Figure 3 (and tables contained in the Appendix) outlines the rate of *Staphylococcus aureus* bacteraemia in each of Tasmania's acute public hospitals.

Figure 3 - Healthcare associated *Staphylococcus aureus* bacteraemia by acute public hospital

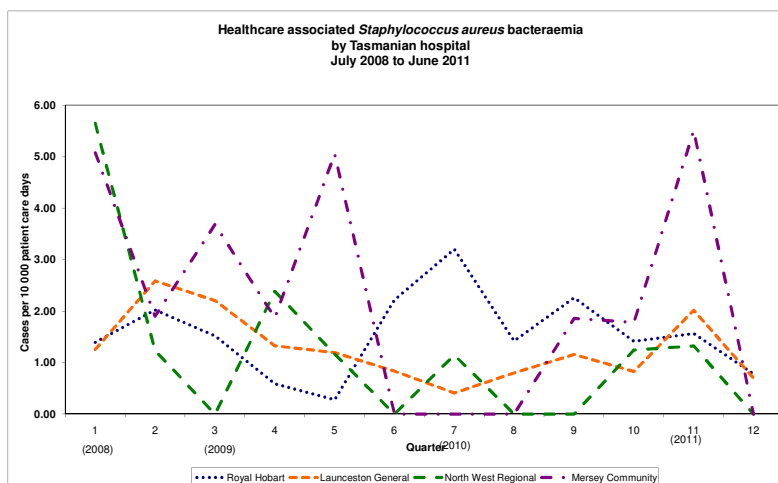
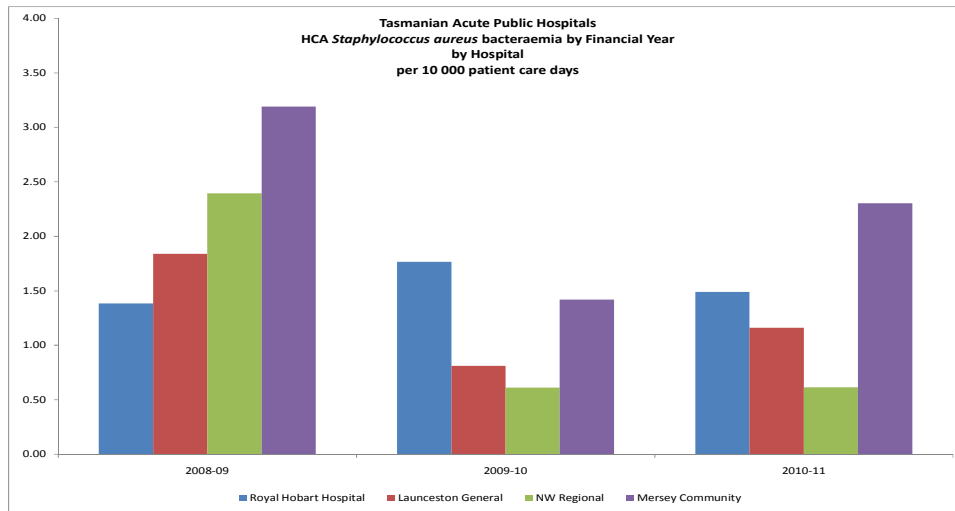


Figure 4 Healthcare associated *Staphylococcus aureus* bacteraemia by acute public hospital by financial year



Key Points

- The Tasmanian rate of healthcare associated *Staphylococcus aureus* bacteraemia is 1.47 per 10 000 patient care days. This is comparable to other Australian states.
 - The rate of HCA SAB in Western Australia public hospitals (2007–10) was 1.05 per 10 000 bed days.¹
 - The rate of HCA SAB in South Australia was 1.4 per 10 000 occupied bed days in 2008.²
 - The rate of hospital onset SAB in New South Wales is reported as 1.1 per 10 000 bed days in 2010³. ‘Hospital onset’ rates are an underestimate of the total HCA rate as they only include cases in hospital >48hrs.
 - The rate of HCA SAB in the Australian Capital Territory was reported as 2.1 per 10 000 bed days in 2005.⁴

¹HISWA correspondence, 2011

²South Australian Healthcare Associated Infection Bloodstream Report 2006-2008

³NSW Health, NSW Healthcare Associated Infections.

http://www.health.nsw.gov.au/resources/quality/hai/pdf/report_jan_mar_2010.pdf

⁴Collignon et al, MJA (2006) 184 (8) p.404-406.

Clostridium difficile Infection

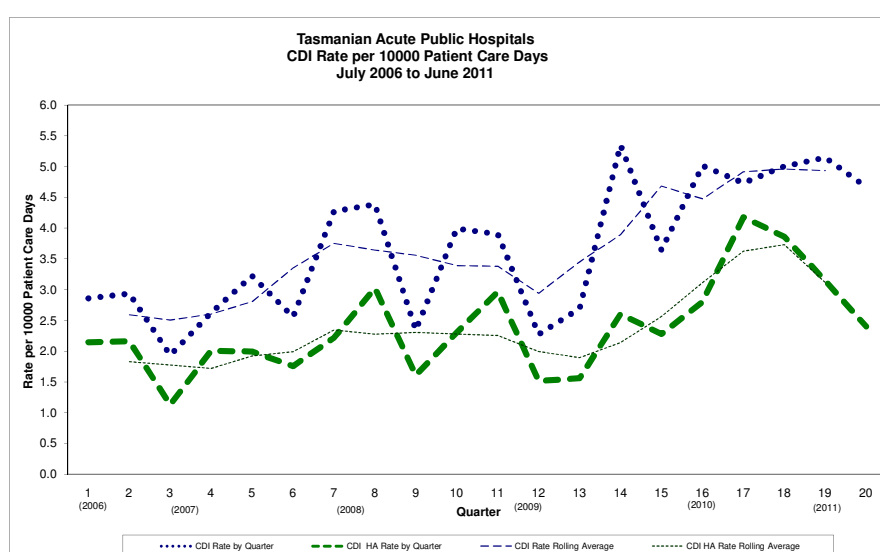
(<2 year olds excluded in denominator and numerator data)

Tasmanian Rate

Figure 5 (and tables contained in the Appendix) outlines the rate of *Clostridium difficile* infection (CDI) for patients presenting to or in each of Tasmania's acute public hospitals. The average (mean) rate of hospital identified *Clostridium difficile* infection between the 1st July 2006 and 30th June 2011 is 3.70 per 10 000 patient care days (95% CI 3.52-3.89) or 1.06 per 1000 separations (95% CI 1.03-1.09).

The average (mean) rate of healthcare associated healthcare facility onset (HCA HFO) *Clostridium difficile* infection between the 1st July 2006 and 30th June 2011 is 2.40 per 10 000 patient care days (95% CI 2.27-2.53).

Figure 5- *Clostridium difficile* infection

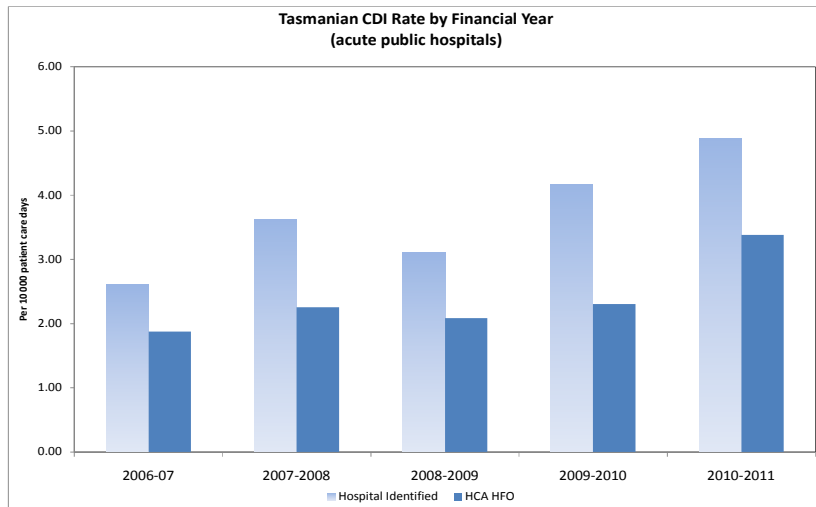


The annual rate of *Clostridium difficile* infection Tasmanian acute public hospitals for the financial years 1st July 2006 to 30th June 2011 are detailed in Table 2 and Figure 6.

Table 2 – Annual rate and number (n) of *Clostridium difficile* infection (>2 yo)

Year	Rate Hospital Identified <i>Clostridium difficile</i> infection 10 000 patient care days (n)	Rate Healthcare associated, healthcare facility onset <i>Clostridium difficile</i> infection 10 000 patient care days (n)
2006-2007	2.60 (68)	1.87 (49)
2007-2008	3.62 (93)	2.26 (58)
2008-2009	3.11 (82)	2.09 (55)
2009-2010	4.17 (114)	2.30 (63)
2010-2011	4.88 (140)	3.38 (97)

Figure 6 - Clostridium difficile infection – Annual rate



Hospital Rates

Figure 7, Figure 8 and Figure 9 outlines the rate of *Clostridium difficile* infection in each of Tasmania's acute public hospitals .

Figure 7 - Rates of Clostridium difficile infection by acute public hospital

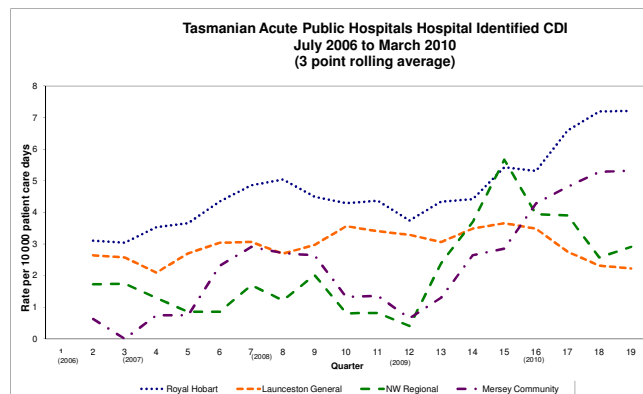


Figure 8 - Rates of *Clostridium difficile* infection by acute public hospital by financial year

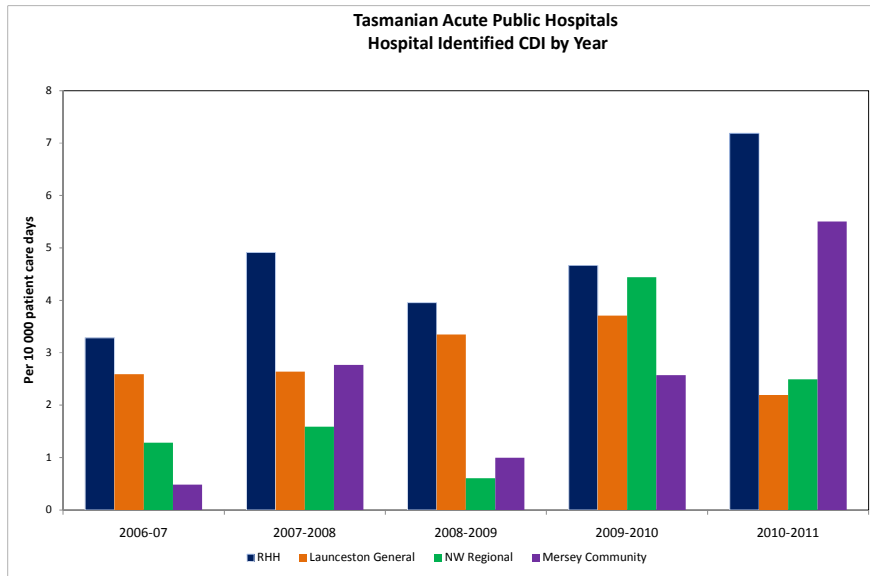
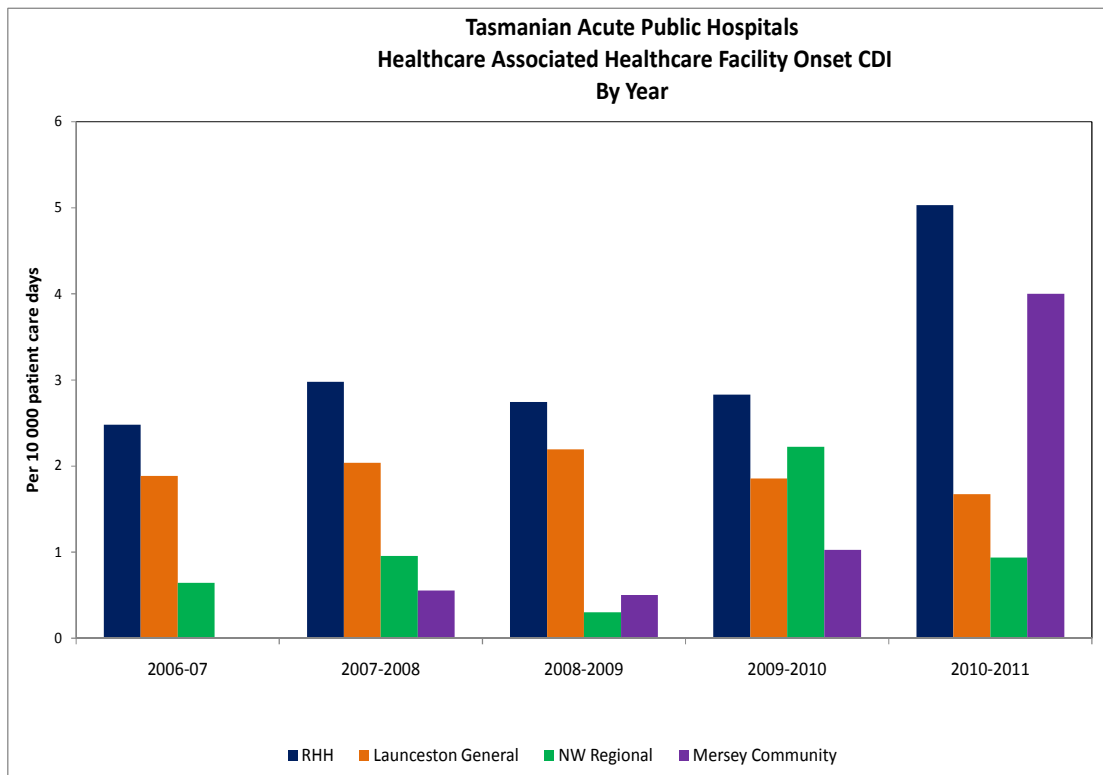


Figure 9 - Rates of healthcare associated healthcare facility onset *Clostridium difficile* infection by acute public hospital by financial year



Key Points

- The rate of laboratory detection of CDI will be affected by how frequently laboratories test faecal samples for *Clostridium difficile* and the sensitivity of the laboratory techniques used to identify *Clostridium difficile*, which may vary. These two factors can impact on the number of *Clostridium difficile* cases identified and therefore the rate of CDI. Variations in laboratory testing methodology are not unique to Tasmania.
- Inconsistencies in the way CDI is diagnosed, classified and reported make benchmarking difficult, and potentially confound the ability to identify clear regional trends or outbreaks.
- TIPCU is working with interstate counterparts and the Australian Commission on Safety and Quality in Health Care (ACSQHC) in standardising the reporting and testing of CDI, allowing for improved benchmarking.
- Direct comparisons between Tasmanian hospitals are not recommended given the variations described above.
- While it remains difficult to compare CDI rates, it appears Tasmanian rates are slightly higher than in other parts of Australia, but generally lower than, or comparable to, those published internationally.
 - The rate of CDI in tertiary Western Australian hospitals is reported as 3.45 per 10 000 bed days or 1.84 per 10 000 bed days for all Western Australian hospitals in 2010.¹
 - The rate of CDI in England was 9.1 per 10 000 bed days in 2007–2008.²

¹HISWA Aggregate Report No.21

²Health Protection Agency. Results of the voluntary reporting scheme for *Clostridium difficile*, England, Wales and Northern Ireland, 2009

Vancomycin Resistant Enterococcus (VRE)

Tasmanian Numbers

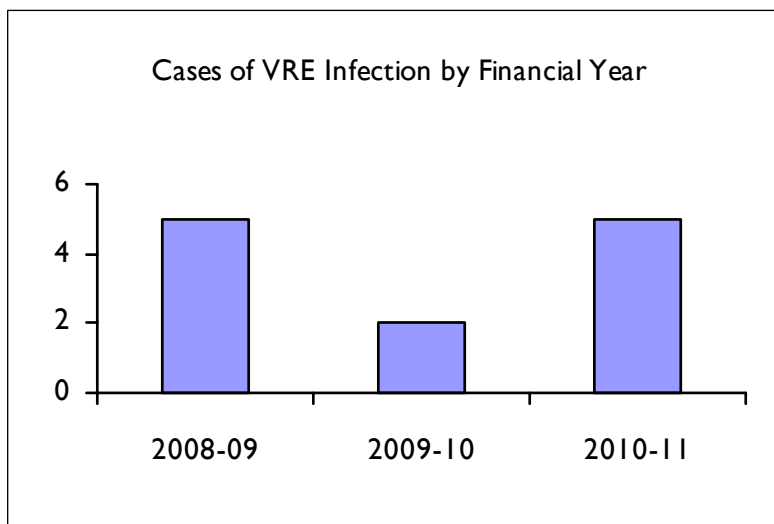
Table 3 - Number of people identified with VRE per quarter

Year	Quarter	Colonisation	Infection	Total*
2006 [^]	N/A	Unknown	Unknown	1
2007 [^]	N/A	Unknown	Unknown	7
2008	1	12	1	13
	2	28	4	32
	3	10	2	12
	4	16	2	18
2009	5	7	0	9
	6	13	1	14
	7	3	1	4
	8	5	0	5
2010	9	2	0	2
	10	4	1	5
	11	13	1	14
	12	6	2	8
2011	13	3	0	3
	14	6	2	8

* Total does not necessarily equal colonisation plus infection due to unknown cases

[^] Calendar year.

Figure 10 – Cases of VRE infection in Tasmania by Financial Year



Hospital Numbers

Table 4 - Number of people identified with VRE by acute public hospital

Quarter		Royal Hobart		Launceston General		NW Regional		Mersey Community	
		Col	Inf	Col	Inf	Col	Inf	Col	Inf
2008	1	10	1	-	-	-	-	-	-
	2	15	2	6	-	6	1	-	-
	3	1	-	1	-	8	2	-	-
	4	2	1	8	1	5	-	-	-
2009	5	-	-	4	-	3	-	2	-
	6	7	1	-	-	2	-	4	-
	7	1	-	-	-	-	1	2	-
	8	2	-	2	-	1	-	-	-
2010	9	1	-	1	-	-	-	-	-
	10	4	-	-	-	-	-	-	1
	11	10	-	-	-	2	-	1	1
	12	3	-	-	-	1	-	1	2
2011	13	-	-	-	-	1	-	2	-
	14	3	1	1	-	-	-	-	-

Col - colonisation

Inf - infection

Key Points

- It is important to note that Table 4 provides information on which hospital **identified** VRE. **This does not necessarily mean that VRE was acquired at this hospital.**
- The numbers of VRE identified are affected by the amount of screening undertaken by hospitals. There is a minimum standard for screening developed by TIPCU, however some hospitals may be more aggressive in their approach and hence are likely to identify more VRE.
- The TIPCU data reflects both colonisation and infection with VRE. Infection is of more clinical concern than colonisation.
- The absolute number of VRE infections identified in Tasmania is lower than many other Australian states.
 - In Victoria, a total of 221 infections (including blood stream infections) were reported during 2007.¹
- TIPCU is working with the Tasmanian HAI Advisory Group and Tasmanian HAI Steering Committee in improving the way VRE is reported, to make it more meaningful at a hospital level.

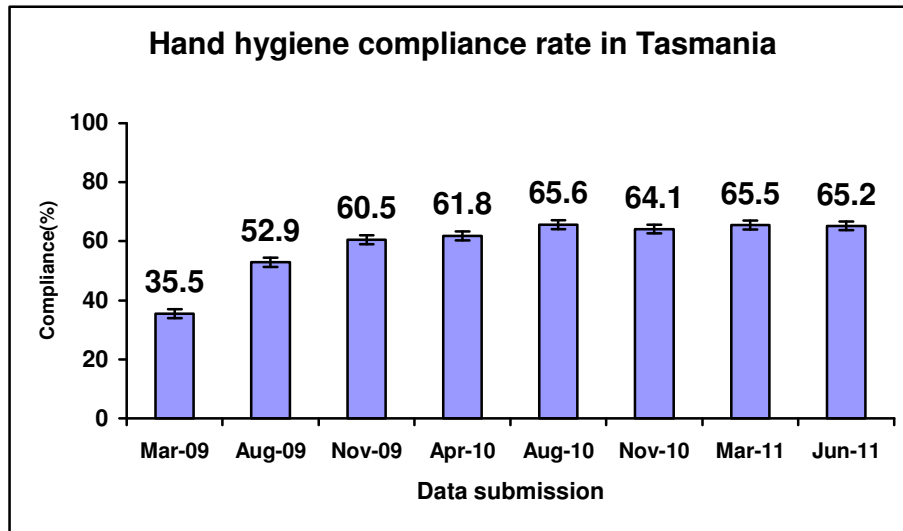
¹VRE in Victorian Health Facilities. <http://www.health.vic.gov.au/infectionprevention/downloads/vre-report.pdf>

Hand Hygiene Compliance Data

Data is based on the 8th Hand Hygiene Data Submission, June 2011.

Tasmanian Rates

Figure 11 Hand hygiene compliance rate in Tasmanian public hospitals¹



¹Includes all Tasmanian public hospitals

Figure 12- Hand hygiene compliance rate by state/territory

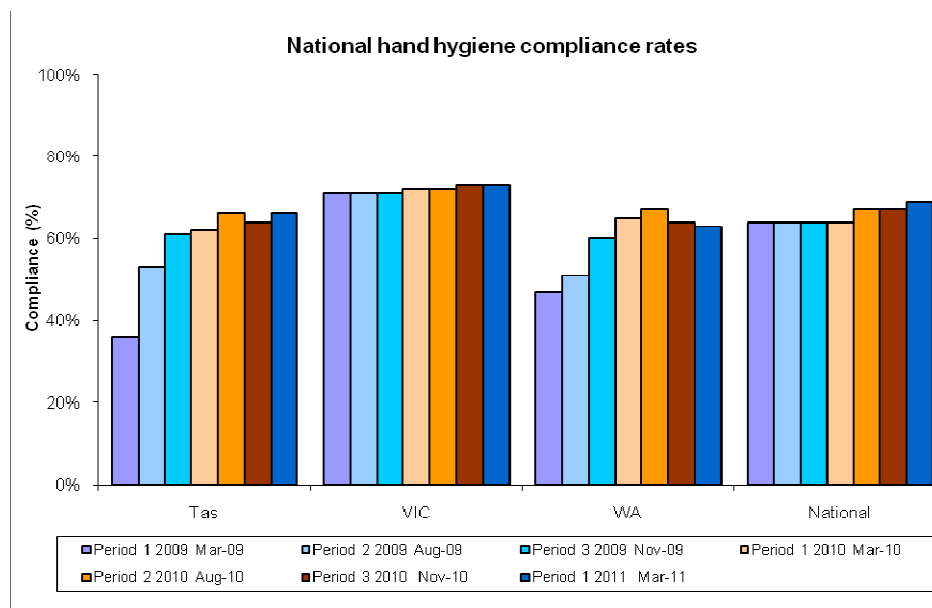


Figure 13 - Hand hygiene compliance by healthcare worker

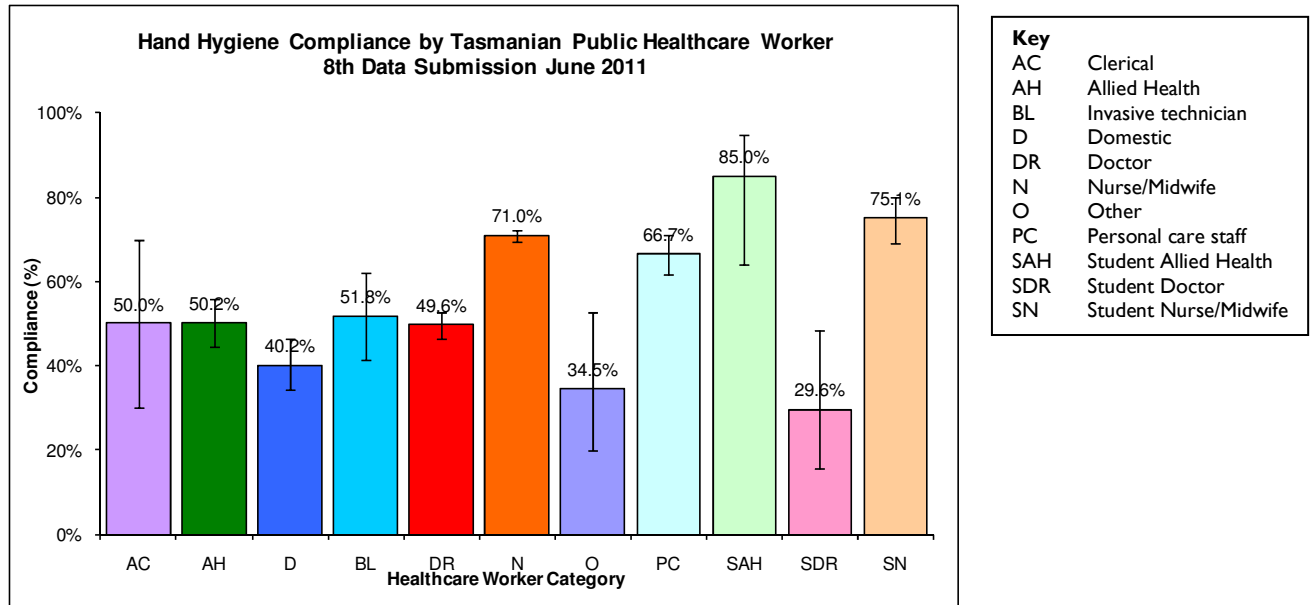
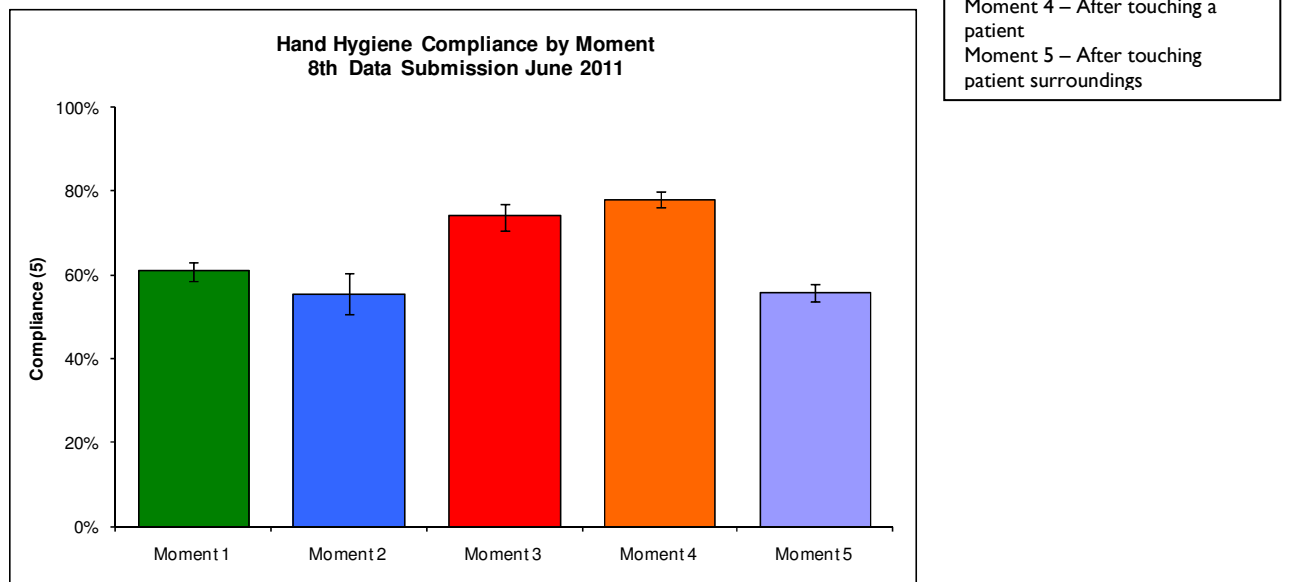
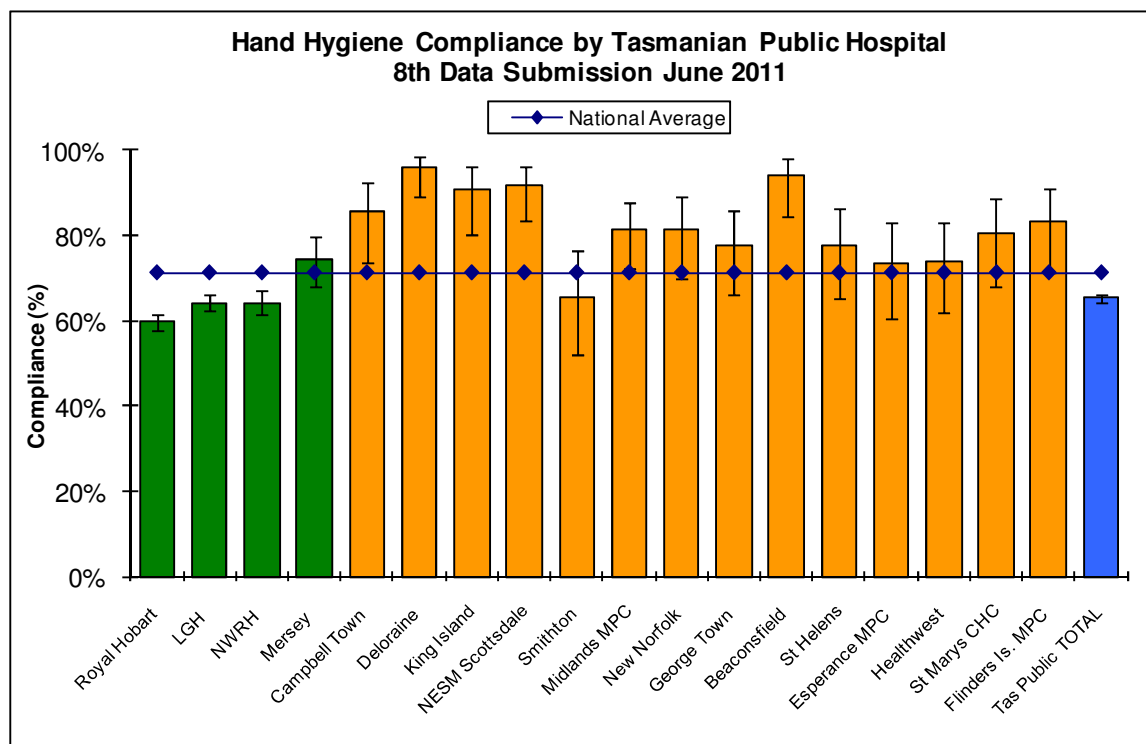


Figure 14 - Hand hygiene compliance by moment



Hospital Rates

Figure 15 - Hand hygiene compliance rate by hospital



* Please note: rural hospitals audit considerably less moments.

Key Points

- Rural hospitals do not collect as much data as the four acute public hospitals, so comparisons between rural and acute hospitals are not recommended.
- The overall rate of Tasmanian hand hygiene compliance has increased from 35.5 per cent in March 2009 (baseline) to 65.2 per cent in the latest report.
- The rate of hand hygiene compliance in Tasmania is comparable to that of other states.
- The rate of hand hygiene compliance varies significantly between Tasmania's acute public hospitals.
- Hand hygiene compliance before touching a patient (Moment 1), undertaking a procedure (Moment 2) and after touching patient surroundings (Moment 5) are lower than those reported after undertaking a procedure (Moment 3) or after touching a patient (Moment 4). This trend is reflected in other Australian and international data.

Antibiotic Utilisation Surveillance

Future Reports

Future reports will also include the rates of antibiotic utilisation in acute hospitals.

Acknowledgements

The production of this report is the culmination of work from a number of different organisations. In particular, we would like to acknowledge:

- Launceston General Hospital Infection Control Team and Executive Director of Nursing
- Royal Hobart Hospital Infection Control Team and Executive Director of Nursing
- North West Area Health Service Infection Control Team and Executive Director of Nursing
- Microbiology Departments at the Royal Hobart Hospital, Launceston General Hospital, DSPL and Gribbles Pathology
- Hand Hygiene Australia
- Communicable Disease Prevention Unit, Population Health
- Contributing Primary Health Sites
- Epidemiology Unit, Population Health.

Appendix

Staphylococcus aureus bacteraemia

Table 5 - Tasmanian numbers and rates of *Staphylococcus aureus* bacteraemia (July 2008 to July 2011)

Quarter	HCA total		HCA inpatients		HCA non inpatients		HCA MRSA		Community	
	Total patients	Rate	Total patients	Rate	Total patients	Rate	Total patients	Rate	Total patients	Rate
Q3 2008	16	2.15	11	1.48	5	0.67	3	0.40	13	1.74
Q4 2008	15	2.11	10	1.41	5	0.70	2	0.28	9	1.26
Q1 2009	12	1.74	6	0.87	6	0.87	2	0.29	17	2.46
Q2 2009	8	1.14	3	0.43	5	0.71	1	0.14	10	1.42
Q3 2009	8	1.06	5	0.66	3	0.40	1	0.13	14	1.85
Q4 2009	10	1.36	7	0.96	3	0.41	0	0.00	21	2.87
Q1 2010	13	1.79	8	1.10	5	0.69	0	0.00	13	1.79
Q2 2010	7	0.97	5	0.69	2	0.28	0	0.00	12	1.66
Q3 2010	12	1.60	9	1.20	3	0.40	1	0.13	12	1.60
Q4 2010	9	1.23	6	0.82	3	0.41	3	0.41	9	1.23
Q1 2011	15	1.97	10	1.31	5	0.66	2	0.26	16	2.10
Q2 2011	5	0.62	2	0.25	3	0.37	0	0.00	10	1.23

* Rate is the number of patients per 10 000 patient care days

Table 6 - Royal Hobart Hospital numbers and rates of *Staphylococcus aureus* bacteraemia (July 2008 to July 2011)

Quarter	HCA total			HCA inpatients		HCA Non inpatients		HCA MRSA		Community	
	Total patients	Rate	Rate ²	Total patients	Rate	Total patients	Rate	Total patients	Rate	Total patients	Rate*
Q3 2008	5	1.39	0.45	5	1.39	0	0.00	2	0.56	6	1.67
Q4 2008	7	2.02	0.61	5	1.44	2	0.58	1	0.29	4	1.16
Q1 2009	5	1.52	0.46	2	0.61	3	0.91	1	0.30	4	1.21
Q2 2009	2	0.59	0.17	2	0.59	0	0.00	1	0.29	1	0.29
Q3 2009	1	0.28	0.09	1	0.28	0	0.00	0	0	7	1.95
Q4 2009	8	2.22	0.70	5	1.39	3	0.83	0	0	6	1.67
Q1 2010	11	3.20	1.01	6	1.75	5	1.46	0	0	2	0.58
Q2 2010	5	1.42	0.47	3	0.85	2	0.57	0	0	5	1.42
Q3 2010	8	2.26	0.72	7	1.98	1	0.28	1	0.28	4	1.13
Q4 2010	5	1.41	0.45	4	1.13	1	0.28	1	0.28	5	1.41
Q1 2011	6	1.56	0.49	5	1.30	1	0.26	2	0.52	6	1.56
Q2 2011	3	0.78	0.19	2	0.52	1	0.26	0	0.00	2	0.52

Rate is the number of patients per 10 000 patient care days

Rate² is the number of patients per 1000 separations

Table 7 - Launceston General Hospital numbers and rates of *Staphylococcus aureus* bacteraemia (July 2008 to July 2011)

Quarter	HCA total			HCA inpatients		HCA non inpatients		HCA MRSA		Community	
	Total patients	Rate	Rate ²	Total patients	Rate	Total patients	Rate	Total patients	Rate	Total patients	Rate*
Q3 2008	3	1.25	0.32	0	0.00	3	1.25	1	0.42	3	1.25
Q4 2008	6	2.59	0.63	3	1.29	3	1.29	1	0.43	2	0.86
Q1 2009	5	2.21	0.56	3	1.32	2	0.88	1	0.44	8	3.53
Q2 2009	3	1.33	0.33	1	0.44	2	0.88	0	0.00	6	2.65
Q3 2009	3	1.20	0.31	1	0.40	2	0.80	1	0.40	4	1.59
Q4 2009	2	0.83	0.25	2	0.83	0	0.00	0	0.00	12	5.00
Q1 2010	1	0.41	0.12	1	0.41	0	0.00	0	0.00	8	3.27
Q2 2010	2	0.80	0.24	2	0.80	0	0.00	0	0.00	2	0.80
Q3 2010	3	1.16	0.36	2	0.77	1	0.39	0	0.00	2	0.77
Q4 2010	2	0.83	0.25	2	0.83	0	0.00	2	0.83	2	0.83
Q1 2011	5	2.02	0.63	3	1.21	2	0.81	0	0.00	8	3.23
Q2 2011	2	0.70	0.22	0	0.00	2	0.70	0	0.00	5	1.75

Rate is the number of patients per 10 000 patient care days

Rate² is the number of patients per 1000 separations

Table 8 - North West Regional Hospital numbers and rates of *Staphylococcus aureus* bacteraemia (July 2008 to July 2011)

Quarter	HCA total			HCA inpatients		HCA non inpatients		HCA MRSA		Community	
	Total patients	Rate	Rate ²	Total patients	Rate	Total patients	Rate	Total patients	Rate	Total patients	Rate*
Q3 2008	5	5.65	2.15	3	3.39	2	2.26	0	0.00	1	1.13
Q4 2008	1	1.24	0.44	1	1.24	0	0.00	0	0.00	1	1.24
Q1 2009	0	0.00	0.00	0	0.00	0	0.00	0	0.00	4	4.97
Q2 2009	2	2.38	0.88	0	0.00	2	2.38	0	0.00	3	3.58
Q3 2009	1	1.17	0.44	0	0.00	1	1.17	0	0.00	2	2.33
Q4 2009	0	0.00	0.00	0	0.00	0	0.00	0	0.00	2	2.50
Q1 2010	1	1.15	0.41	1	1.15	0	0.00	0	0.00	2	2.29
Q2 2010	0	0.00	0.00	0	0.00	0	0.00	0	0.00	2	2.71
Q3 2010	0	0.00	0.00	0	0.00	0	0.00	0	0.00	4	4.91
Q4 2010	1	1.24	0.48	0	0.00	1	1.24	0	0.00	2	2.49
Q1 2011	1	1.32	0.50	1	1.32	0	0.00	0	0.00	1	1.32
Q2 2011	0	0.00	0.00	0	0.00	0	0.00	0	0.00	3	3.40

Rate is the number of patients per 10 000 patient care days

Rate² is the number of patients per 1000 separations

Table 9 - Mersey Community Hospital numbers and rates of *Staphylococcus aureus* bacteraemia (July 2008 to July 2011)

Quarter	HCA total			HCA inpatients		HCA non inpatients		HCA MRSA		Community	
	Total patients	Rate	Rate ²	Total patients	Rate	Total patients	Rate	Total patients	Rate	Total patients	Rate
Q3 2008	3	5.08	1.40	3	5.08	0	0.00	0	0.00	3	5.08
Q4 2008	1	1.90	0.47	1	1.90	0	0.00	0	0.00	2	3.80
Q1 2009	2	3.68	0.96	1	1.84	1	1.84	0	0.00	1	1.84
Q2 2009	1	1.87	0.43	0	0.00	1	1.87	0	0.00	0	0.00
Q3 2009	3	5.05	1.27	3	5.05	0	0.00	0	0.00	1	1.68
Q4 2009	0	0.00	0.00	0	0.00	0	0.00	0	0.00	1	1.91
Q1 2010	0	0.00	0.00	0	0.00	0	0.00	0	0.00	1	1.92
Q2 2010	0	0.00	0.00	0	0.00	0	0.00	0	0.00	3	6.32
Q3 2010	1	1.86	0.45	0	0.00	1	1.86	0	0.00	2	3.72
Q4 2010	1	1.78	0.43	0	0.00	1	1.78	0	0.00	0	0.00
Q1 2011	3	5.51	1.32	1	1.84	2	3.67	0	0.00	1	1.84
Q2 2011	0	0.00	0.00	0	0.00	0	0.00	0	0.00	0	0.00

Rate is the number of patients per 10 000 patient care days

Rate² is the number of patients per 1000 separations

Clostridium difficile Infection

Table 10 - Numbers and rates of *Clostridium difficile* infection (> 2 years old)
(July 2006 to July 2011)

Quarter	Total CDI Identified	Rate*	Total HCA HFO [^]	Rate*
Q3 2006	20	2.9	15	2.1
Q4 2006	19	2.9	14	2.2
Q1 2007	12	1.9	7	1.1
Q2 2007	17	2.6	13	2.0
Q3 2007	21	3.2	13	2.0
Q4 2007	16	2.6	11	1.8
Q1 2008	27	4.3	14	2.2
Q2 2008	29	4.4	20	3.0
Q3 2008	16	2.3	11	1.6
Q4 2008	26	4.0	15	2.3
Q1 2009	25	3.9	19	3.0
Q2 2009	15	2.3	10	1.5
Q3 2009	19	2.7	11	1.6
Q4 2009	37	5.3	18	2.6
Q1 2010	24	3.6	15	2.3
Q2 2010	34	5.0	19	2.8
Q3 2010	34	4.7	30	4.2
Q4 2010	35	5.0	27	3.9
Q1 2011	35	5.0	25	3.6
Q2 2011	35	4.7	18	2.4

[^] Healthcare associated, healthcare facility onset

* Rate is the number of patients per 10 000 patient care days

Table 11- Hospital numbers and rates of **hospital identified** *Clostridium difficile* infection
(July 2006 to July 2011) (> 2 years old)

Quarter	Royal Hobart			Launceston General			NW Regional			Mersey Community		
	Total patients	Rate	Rate ²	Total patients	Rate	Rate ²	Total patients	Rate	Rate ²	Total patients	Rate	Rate ²
Q3 2006	13	4.0	1.3	6	2.6	0.7	0	0.0	0.0	1	1.6	0.5
Q4 2006	11	3.6	1.1	6	2.8	0.7	2	2.6	1.0	0	0.0	0.0
Q1 2007	5	1.7	0.5	5	2.5	0.6	2	2.7	1.0	0	0.0	0.0
Q2 2007	12	3.8	1.1	5	2.4	0.6	0	0.0	0.0	0	0.0	0.0
Q3 2007	16	5.1	1.5	3	1.4	0.3	1	1.3	0.5	1	2.3	0.6
Q4 2007	6	2.0	0.6	9	4.3	1.1	1	1.3	0.5	0	0.0	0.0
Q1 2008	18	5.9	1.7	7	3.4	0.8	0	0.0	0.0	2	4.6	1.2
Q2 2008	21	6.5	1.9	3	1.4	0.3	3	3.7	1.4	2	3.9	1.0
Q3 2008	9	2.8	0.9	7	3.2	0.8	0	0.0	0.0	0	0.0	0.0
Q4 2008	13	4.2	1.2	9	4.2	1.0	2	2.5	0.9	2	4.2	1.0
Q1 2009	18	6.1	1.7	7	3.3	0.8	0	0.0	0.0	0	0.0	0.0
Q2 2009	9	2.9	0.8	6	2.7	0.7	0	0.0	0.0	0	0.0	0.0
Q3 2009	8	2.4	0.7	9	3.9	0.9	1	1.2	0.5	1	1.8	0.4
Q4 2009	25	7.6	2.3	6	2.6	0.8	5	6.1	2.4	1	2.0	0.5
Q1 2010	10	3.2	0.9	9	4.0	1.2	3	3.9	1.4	2	4.3	1.0

Q2 2010	18	5.4	1.7	10	4.4	1.2	5	7.0	2.5	1	2.3	0.5
Q3 2010	25	7.1	2.3	5	2.1	0.6	1	1.2	0.5	3	6.0	1.3
Q4 2010	25	7.5	2.3	4	1.8	0.5	3	3.8	1.5	3	5.7	1.3
Q1 2011	25	7.2	2.1	7	3.0	0.9	2	2.7	1.0	2	4.0	0.9
Q2 2011	25	7.2	1.7	5	1.9	0.6	2	2.3	1.0	3	6.2	1.3

Rate is the number of patients per 10 000 patient care days

Rate² is the number of patients per 1000 separations

Table 12- Hospital numbers and rates of **healthcare associated, healthcare facility onset *Clostridium difficile* infection** (July 2006 to July 2011) (>2 years old)

Quarter	Royal Hobart		Launceston General		NW Regional		Mersey Community	
	Total patients	Rate [^]	Total patients	Rate [^]	Total patients	Rate [^]	Total patients	Rate [^]
Q3 2006	10	3.0	5	2.2	0	0.0	0	0.0
Q4 2006	10	3.3	3	1.4	1	1.3	0	0.0
Q1 2007	1	0.3	5	2.5	1	1.3	0	0.0
Q2 2007	10	3.2	3	1.5	0	0.0	0	0.0
Q3 2007	9	2.8	3	1.4	1	1.3	0	0.0
Q4 2007	4	1.3	7	3.4	0	0.0	0	0.0
Q1 2008	10	3.3	4	2.0	0	0.0	0	0.0
Q2 2008	14	4.3	3	1.4	2	2.5	1	2.0
Q3 2008	7	2.2	4	1.8	0	0.0	0	0.0
Q4 2008	9	2.9	4	1.9	1	1.2	1	2.1
Q1 2009	13	4.4	6	2.8	0	0.0	0	0.0
Q2 2009	5	1.6	5	2.3	0	0.0	0	0.0
Q3 2009	6	1.8	5	2.1	0	0.0	0	0.0
Q4 2009	12	3.6	3	1.3	2	2.5	1	2.0
Q1 2010	7	2.2	5	2.2	3	3.9	0	0.0
Q2 2010	12	3.6	4	1.7	2	2.8	1	2.3
Q3 2010	21	6.0	5	2.1	1	1.2	3	6.0
Q4 2010	20	5.8	4	1.8	1	1.3	2	3.8
Q1 2011	15	4.3	5	2.2	0	0.0	2	4.0
Q2 2011	14	4.0	2	0.8	1	1.1	1	2.1

[^] Rate is the number of patients per 10 000 patient care days

Hand Hygiene Compliance Data (June 2011)

Table 13– Hand hygiene compliance rates by Tasmanian hospital and state level

Hospital	Hand Hygiene Compliance Rate	Lower 95% Confidence	Upper 95% Confidence
Royal Hobart	59.7%	57.7%	61.6%
Launceston General	64.2%	62.2%	66.2%
NW Regional	64.2%	61.3%	67.0%
Mersey Community	74.5%	68.2%	80.0%
Campbell Town	85.5%	73.8%	92.4%
Deloraine	96.1%	89.0%	98.6%
King Island	90.9%	80.4%	96.1%
Scottsdale	91.9%	83.4%	96.2%
Smithton	65.5%	52.3%	76.6%
Midlands (Oatlands)	81.2%	72.5%	87.6%
New Norfolk	81.3%	70.0%	88.9%
George Town	77.6%	66.3%	85.9%
Beaconsfield	94.2%	84.4%	98.0%
St Helens	77.6%	65.3%	86.4%
Esperance (Dover)	73.2%	60.4%	83.0%
Queenstown	73.8%	62.0%	83.0%
St Marys	80.4%	68.2%	88.7%
Flinders Island	83.3%	71.3%	91.0%
Tasmanian Rate	65.2%	64.1%	66.4%

Table 14– Tasmanian hand hygiene compliance rates by healthcare worker (June 2011)

Healthcare worker code	Healthcare worker	Hand hygiene compliance rate	Lower 95% confidence	Upper 95% confidence
AC	Clerical	50.0%	29.9%	70.1%
AH	Allied Health	50.2%	44.6%	55.7%
BL	Invasive technician	51.8%	41.3%	62.1%
D	Domestic	40.2%	34.3%	46.4%
DR	Doctor	49.6%	46.5%	52.8%
N	Nurse/midwife	71.0%	69.7%	72.3%
O	Other	34.5%	19.9%	52.7%
PC	Personal care staff	66.7%	61.8%	71.2%
SAH	Student Allied Health	85.0%	64.0%	94.8%
SDR	Student doctor	29.6%	15.9%	48.5%
SN	Student nurse/midwife	75.1%	69.2%	80.2%

Table 15– Tasmanian hand hygiene compliance rates by moment

Moment	Hand hygiene compliance rate	Lower 95% confidence	Upper 95% confidence
1	61.0%	58.7%	63.2%
2	55.6%	50.8%	60.3%
3	74.0%	70.6%	77.1%
4	78.1%	76.2%	79.9%
5	55.8%	53.7%	57.9%



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Division of Population Health

Department of Health and Human Services

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