TASMANIAN INFECTION PREVENTION AND CONTROL UNIT

Tasmanian Acute Public Hospitals

Healthcare Associated Infection Surveillance Report

Report 19 – Quarter 3 2013

Department of Health and Human Services

Tasmania
Explore the possibilities

Tasmanian Acute Public Hospitals Healthcare Associated Infection Surveillance Report

Tasmanian Infection Prevention and Control Unit (TIPCU)

Department of Health and Human Services, Tasmania

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Peer reviewed and approved by the Tasmanian Healthcare Associated Advisory Committee and Chief Medical Officer, DHHS Tasmania.

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 up to date report when quoting/using data.

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Executive summary

This surveillance report describes data relating to a number of key Healthcare Associated Infection (HAI) 'indicators'. It is the intention of the Tasmanian Infection Prevention and Control Unit (TIPCU) to publish this report quarterly. 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 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.

Of note since the last report is the new Strategy for the Prevention and Control of Healthcare Associated Infections in Tasmania (2013-2015). This Strategy is complemented by changes to the TIPCU governance structure, including the recent formation of the Tasmanian Healthcare Associated Infection Advisory Committee. These changes signify the extent of progress made to date and a mature and coherent approach to the prevention and control of healthcare associated infections in Tasmania.

The key findings of this report are:

- The rate of healthcare associated *Staphylococcus aureus* bacteraemia remains low.
- There has been a small decrease in hospital identified *Clostridium difficile* infection but a small increase healthcare associated-healthcare facility onset *Clostridium difficile* infection.
- The occurrence of vancomycin resistant enterococcus remains low.





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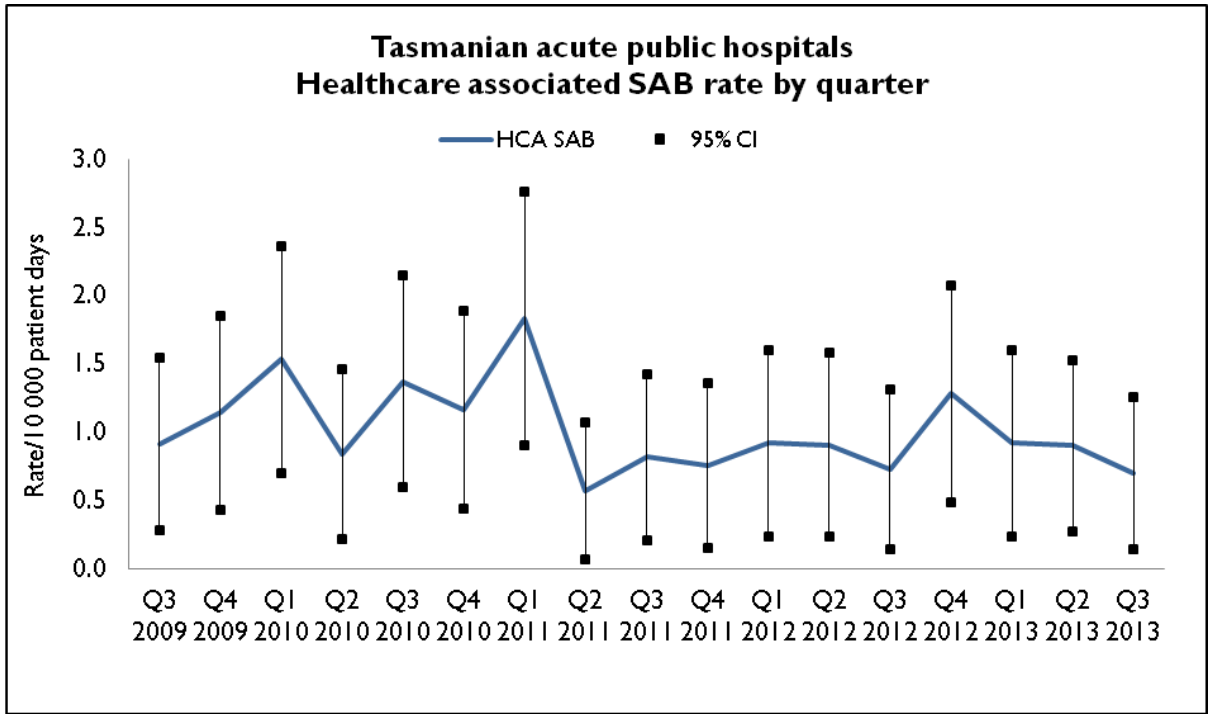
Staphylococcus aureus bacteraemia (SAB)

Tasmanian rates

Figure 1 outlines the Tasmanian combined acute public hospital rates of healthcare associated *Staphylococcus aureus* bacteraemia (HCA SAB).

The mean (average) rate of healthcare associated *Staphylococcus aureus* bacteraemia between July 1st 2009 and September 30th 2013 is 1.02 per 10 000 patient days (95% CI 0.85 – 1.19).

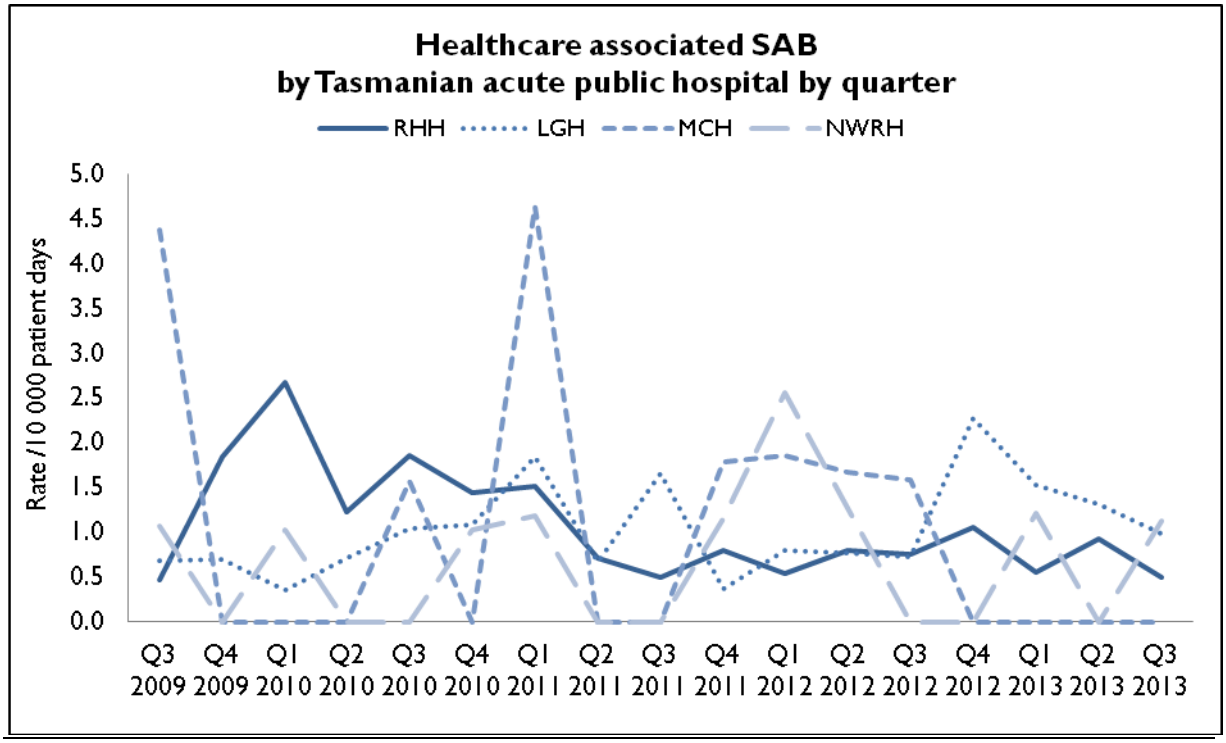
Figure 1 Healthcare associated *Staphylococcus aureus* bacteraemia rate.



Hospital rates

Figure 2 outlines 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 hospital



Key points

- All four public hospitals had HCA SAB rates below the National Healthcare Agreement (2011) target of no more than of 2 HCA SAB/10 000 patient days[1].
- The Tasmanian rate of healthcare associated *Staphylococcus aureus* bacteraemia (HCA SAB) is comparable to data reported in other Australian states and territories.
    - The HCA SAB rate in 2011 -12 in Western Australia tertiary healthcare facilities was 0.83 per 10 000 bed days[2].
    - The rate of HCA SAB in South Australia was reported as1.0 per 10 000 patient days in 2011[3].
    - The rate of HCA SAB at The Canberra Hospital in 2011-2012 is reported as 1.40 cases per 10,000 days of patient care[4].

1. MyHospitals http://www.myhospitals.gov.au/publications/sab/may-2013/report/summary
2. HISWA Annual Report 2011-2012.
3. South Australian Healthcare Associated Bloodstream Infection Report 2011
4. MyHospitals http://www.myhospitals.gov.au/hospital/the-canberra-hospital/safety-and-quality/sab

Clostridium difficile infection

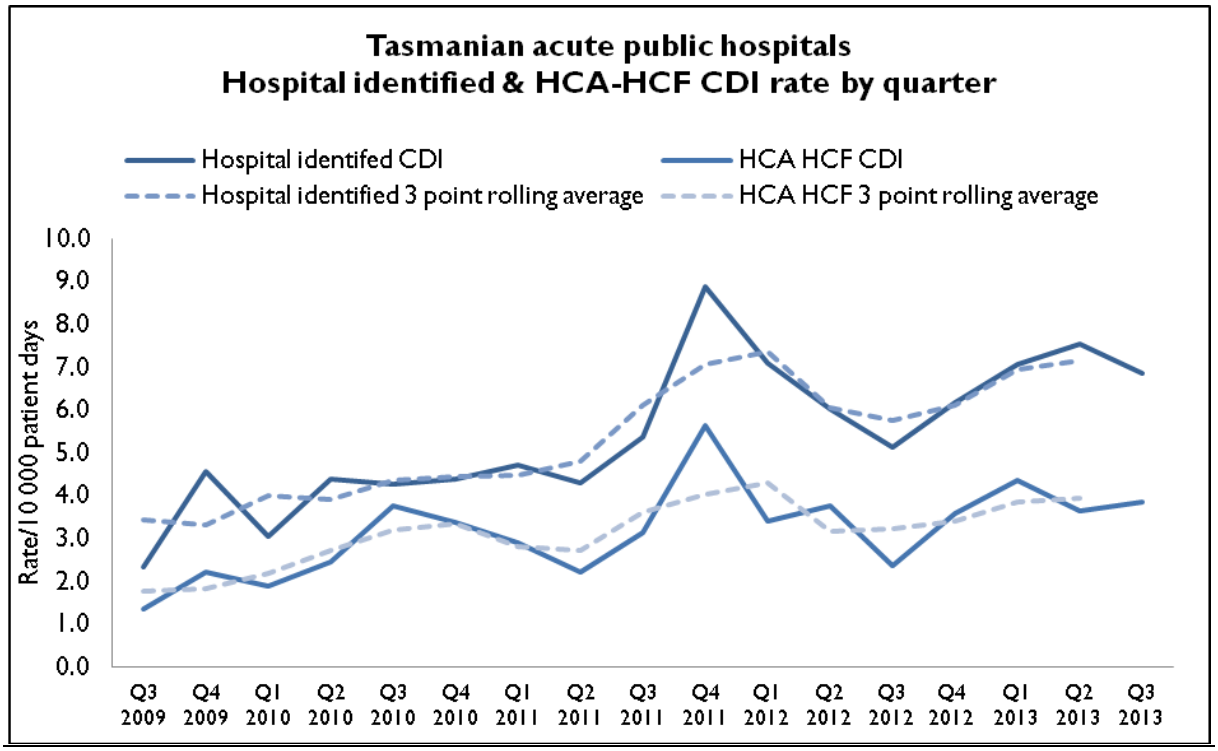
Tasmanian rates

Figure 3outlines the Tasmanian combined acute public hospital rates of **hospital identified** and the **healthcare associated-healthcare facility onset** (HCA-HCF) rates of Clo*stridium difficile* infection (CDI).

The mean (average) rate of **hospital identified** CDI between July 1st 2009 and September 30th 2013 is 5.38 per 10 000 patient days (95% CI 4.98 – 5.78).

The mean rate of **healthcare associated – healthcare facility onset (HCA-HCF)** CDI between July 1st 2009 and September 30th 2013 is 3.15 per 10 000 patient days (95% CI 2.85 – 3.46)

Figure 3 Hospital identified and HCA-HCF *Clostridium difficile* infection rates.



Hospital rates

Figure 4 and Figure 5 outlines the individual acute public hospital rates of hospital identified and healthcare associated-healthcare facility onset (HCA-HCF) *Clostridium difficile* infection. This information is also contained in tables within the Appendix.

Figure 4 Hospital identified *Clostridium difficile* infection rate by hospital.

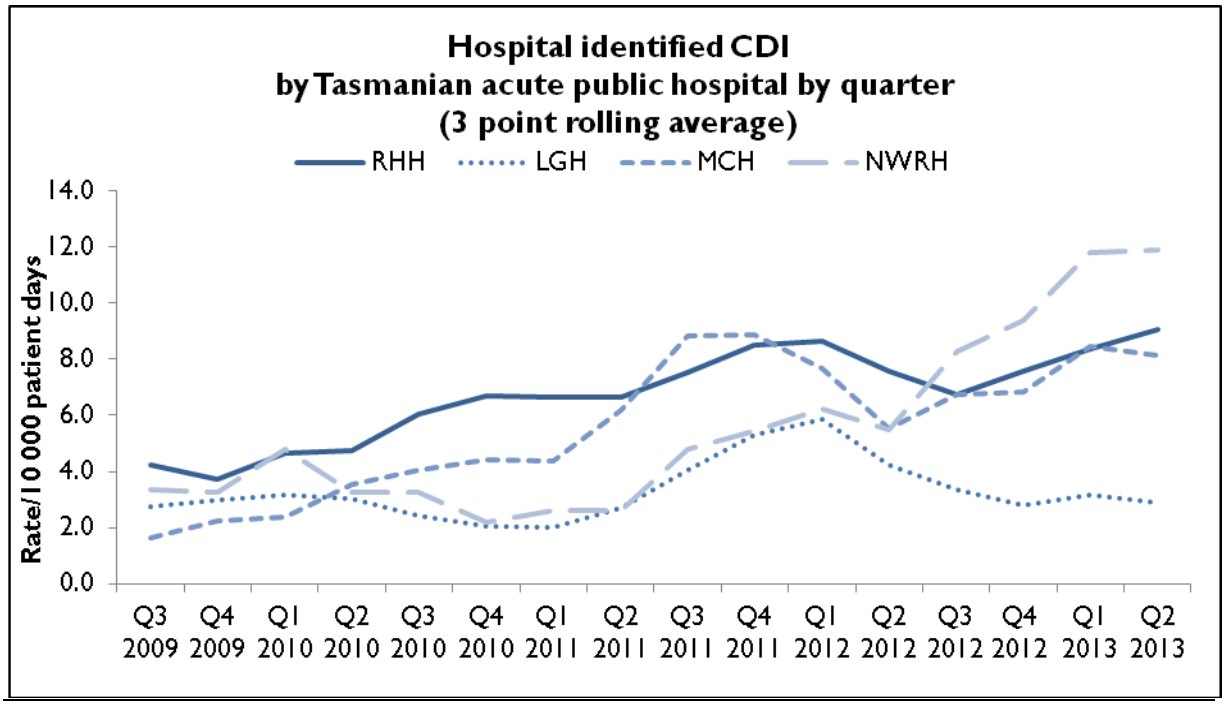
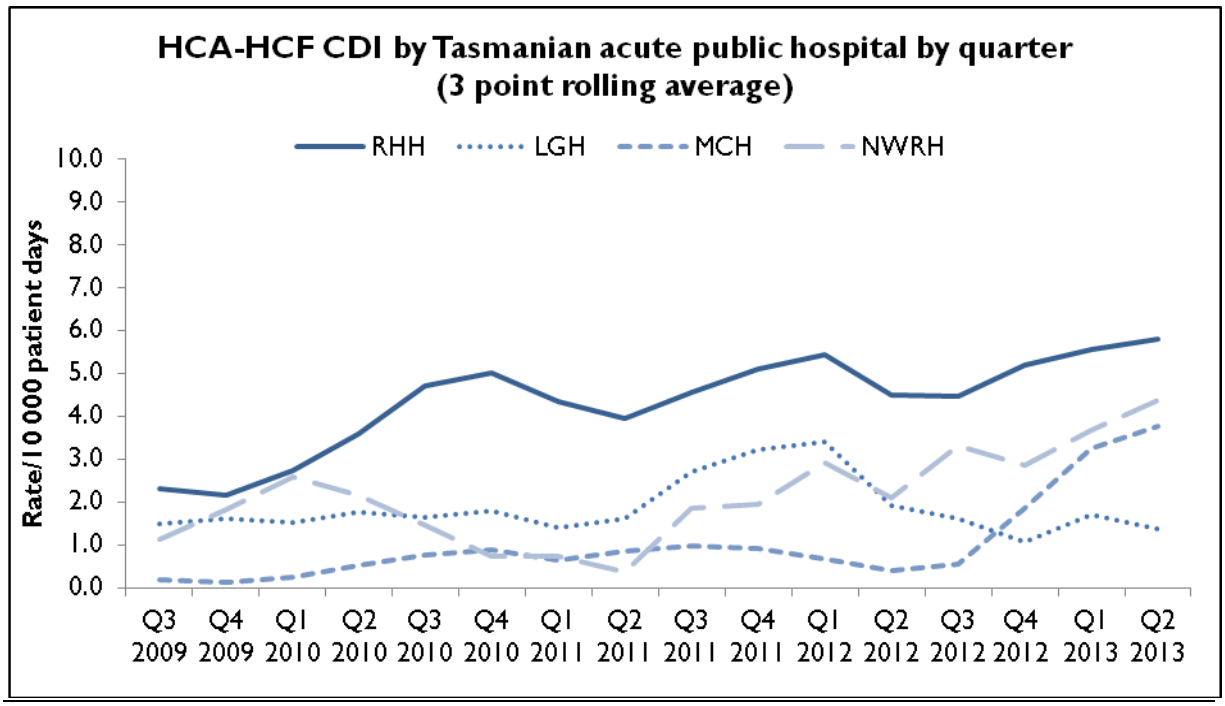


Figure 5 Healthcare associated – healthcare facility onset (HCA-HCF) *Clostridium difficile* infection rate by hospital.



Key points

- The HCA-HCF rate excludes persons who present to hospital with symptoms of CDI and/or develop symptoms within 2 days of admission.
- The three point rolling average calculates the average rate of the previous, current and next quarter thus this rate will always be reported up to the end of the previous quarter.
- The rate of hospital identified CDI has decreased for this quarter from the previous quarter - 6.9/10 000 patient days down from 7.5/10 000 patient days - this represents 3 less cases for Q3 2013 over Q2 2013.
- The rate of HCA HCF CDI has increased slightly this quarter - 3.9/10 000 patient days up from 3.6/10 000 patient days in the previous quarter. This represents 3 extra HCA HCF cases for Q3 2013 over Q2 2013.
- The rate of hospital identified CDI in Western Australian public hospitals in Q2 2013 was 4.3 per 10 000 bed days[1]. ·

1. HISWA Quarterly Aggregate Report Quarter 2, 2013 – Number 32

Vancomycin resistant *enterococcus* (VRE)
Tasmanian numbers

Table 1 –new VRE isolates per quarter within 1) acute public hospitals and 2) total Tasmanian isolates

	RHH	LGH	MCH	NWRH	Total Tasmanian
Q1 2008	11	-	-	-	**13**
Q2 2008	17	6	-	7	**32**
Q3 2008	1	1	-	10	**12**
Q4 2008	3	9	-	5	**18**
Q1 2009	-	4	2	3	**9**
Q2 2009	8	-	4	2	**14**
Q3 2009	1	-	2	1	**4**
Q4 2009	2	2	1	-	**6**
Q1 2010	1	-	1	-	**2**
Q2 2010	4	-	1	-	**5**
Q3 2010	10	-	2	2	**14**
Q4 2010	3	-	3	1	**8**
Q1 2011	-	-	2	1	**3**
Q2 2011	3	1	-	-	**8**
Q3 2011	1	1	-	-	**3**
Q4 2011	3	-	-	-	**5**
Q1 2012	3	2	2	2	**10**
Q2 2012	4	2	-	1	**7**
Q3 2012	3	2	2	-	**8**
Q4 2012	1	5	1	1	**10**
Q1 2013	13	0	3	-	**18**
Q2 2013	8	3	-	1	**15**
Q 3 2013	8	1	-	2	**12**

Key points

- This table provides information on both new hospital identified VRE and the total number of new VRE isolates identified across Tasmania.
- Isolates that are classified as 'hospital identified' does not necessarily mean that VRE was acquired at that hospital. Numbers of VRE isolates identified are affected by the amount of screening undertaken by hospitals. Some hospitals may be more aggressive in their approach and hence may identify more VRE.
- The 'total isolates identified' includes all new cases identified in Tasmania and includes isolates from public and private hospitals, GP clinics and long term and residential care facilities.

Acknowledgements

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

- Executive Director of Nursing THO North
- Executive Director of Nursing THO North West
- Executive Director of Nursing THO South
- Launceston General Hospital Infection Control Unit
- North West Regional Hospital Infection Control Team
- Mersey Community Hospital Infection Control Team
- Royal Hobart Hospital Infection Prevention and Control Unit
- The National Antimicrobial Utilisation Surveillance Program (NAUSP)
- Microbiology Departments at the Royal Hobart Hospital, Launceston General Hospital and DSPL
- Hand Hygiene Australia
- Communicable Disease Prevention Unit, Population Health
- Contributing Primary Health Sites

Appendix

Staphylococcus aureus bacteraemia

Data which classifies healthcare associated *Staphylococcus aureus* bacteraemia into Criterion A (>48 after admission or <48 hours after discharge) OR Criterion B (≤ 48 hours after hospital admission and one of more key clinical criteria met) is available upon request.

Table 2 - Tasmanian numbers and rate/10 000 patient days of healthcare associated *Staphylococcus aureus* bacteraemia (HCA-SAB).

Quarter	Total HCA-SAB	Number MSSA	Number MRSA	HCA SAB Rate
Q3 2009	8	7	1	0.91
Q4 2009	10	10	0	1.15
Q1 2010	13	13	0	1.53
Q2 2010	7	7	0	0.84
Q3 2010	12	11	1	1.47
Q4 2010	10	7	3	1.27
Q1 2011	15	13	2	1.83
Q2 2011	5	5	0	0.67
Q3 2011	7	7	0	0.82
Q4 2011	6	4	2	0.85
Q1 2012	7	6	1	0.92
Q2 2012	7	6	1	0.91
Q3 2012	6	6	0	0.73
Q4 2012	10	9	1	1.28
Q1 2013	7	7	0	0.92
Q2 2013	8	7	1	0.90
Q3 2013	6	6	0	0.70

Table 3 - Royal Hobart Hospital numbers and rates/10 000 patient days of healthcare associated *Staphylococcus aureus* bacteraemia.

Quarter	Total HCA-SAB	Number MSSA	Number MRSA	HCA SAB Rate
Q3 2009	2	2	0	0.48
Q4 2009	8	8	0	1.85
Q1 2010	11	11	0	2.68
Q2 2010	5	5	0	1.23
Q3 2010	8	7	1	1.86
Q4 2010	6	5	1	1.45
Q1 2011	6	4	2	1.51
Q2 2011	3	3	0	0.71
Q3 2011	2	2	0	0.50
Q4 2011	3	2	1	0.79
Q1 2012	2	2	0	0.54
Q2 2012	3	3	0	0.80
Q3 2012	3	3	0	0.75
Q4 2012	4	4	0	1.06
Q1 2013	2	2	0	0.56
Q2 2013	4	4	0	0.93
Q3 2013	2	2	0	0.49

Table 4 - Launceston General Hospital numbers and rates/10 000 patient days of healthcare associated *Staphylococcus aureus* bacteraemia.

Quarter	Total HCA-SAB	Number MSSA	Number MRSA	HCA SAB Rate
Q3 2009	2	1	1	0.68
Q4 2009	2	2	0	0.69
Q1 2010	1	1	0	0.36
Q2 2010	2	2	0	0.71
Q3 2010	3	3	0	1.04
Q4 2010	3	1	2	1.08
Q1 2011	5	5	0	1.84
Q2 2011	2	2	0	0.67
Q3 2011	5	5	0	1.67
Q4 2011	1	1	0	0.36
Q1 2012	2	1	1	0.79
Q2 2012	2	2	0	0.78
Q3 2012	2	2	0	0.73
Q4 2012	6	5	1	2.27
Q1 2013	4	4	0	1.53
Q2 2013	4	3	1	1.32
Q3 2013	3	3	0	0.99

Table 5 - Mersey Community Hospital numbers and rates/10 000 patient days of healthcare associated *Staphylococcus aureus* bacteraemia.

Quarter	Total HCA-SAB	Number MSSA	Number MRSA	HCA SAB Rate
Q3 2009	3	3	0	4.38
Q4 2009	0	0	0	0.00
Q1 2010	0	0	0	0.00
Q2 2010	0	0	0	0.00
Q3 2010	1	1	0	1.58
Q4 2010	0	0	0	0.00
Q1 2011	3	3	0	4.64
Q2 2011	0	0	0	0.00
Q3 2011	0	0	0	0.00
Q4 2011	1	0	1	1.79
Q1 2012	1	1	0	1.86
Q2 2012	1	1	0	1.67
Q3 2012	1	1	0	1.59
Q4 2012	0	0	0	0.00
Q1 2013	0	0	0	0.00
Q2 2013	0	0	0	0.00
Q3 2013	0	0	0	0.00

Table 6 - North West Regional Hospital numbers and rates/10 000 patient days of healthcare associated *Staphylococcus aureus* bacteraemia.

Quarter	Total HCA-SAB	Number MSSA	Number MRSA	HCA SAB Rate
Q3 2009	1	1	0	1.07
Q4 2009	0	0	0	0.00
Q1 2010	1	1	0	1.02
Q2 2010	0	0	0	0.00
Q3 2010	0	0	0	0.00
Q4 2010	1	1	0	1.02
Q1 2011	1	1	0	1.19
Q2 2011	0	0	0	0.00
Q3 2011	0	0	0	0.00
Q4 2011	1	1	0	1.16
Q1 2012	2	2	0	2.56
Q2 2012	1	0	1	1.28
Q3 2012	0	0	0	0.00
Q4 2012	0	0	0	0.00
Q1 2013	1	1	0	1.21
Q2 2013	0	0	0	0.00
Q3 2013	1	1	0	1.12

Clostridium difficile infection (CDI)

Table 7 – Tasmanian numbers and rates/10 000 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	7.4	27	3.5
Q3 2013	55	6.9	31	3.9

Table 8 - Hospital numbers and rates/10 000 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

Table 9 - Hospital numbers and rates/10 000 patient days of **healthcare associated, healthcare facility onset** 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



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