

Tasmanian Acute Public Hospitals Healthcare Associated Infection Surveillance Report

November 2010

Report No: 7 (Period ending 30th September
2010)

Editors

- Brett Mitchell, TIPCU
- Dr Alistair McGregor, TIPCU
- Saffron Brown, TIPCU
- Anne Wells, TIPCU

Notes

- **Commonly used terms and acronyms are defined in the Glossary section at the end of this report**
- **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**
- **An explanatory document is available on the TIPCU website. This document provides insight into understanding the surveillance report**

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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 & Control Unit (TIPCU) to publish this report quarterly.

The TIPCU website (www.dhhs.tas.gov.au) 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. The explanatory document provides insight into how to interpret data contained in this report.

The Appendices contain more detailed information.

The key findings of this report are:

- Rates for *Staphylococcus aureus* bacteraemia and *Clostridium difficile* infection are now reported as a rate per 10 000 patient care days, consistent with national definitions. Rates per 1000 separations are provided for information
- The rate of healthcare associated *Staphylococcus aureus* bacteraemia remains steady
- The rate of *Clostridium difficile* infection (CDI) is lower than the previous quarter. There has been a significant increase in the rate of CDI when comparing 2008/09 to 2009/10. There are a number of potential reasons for this increase, including different laboratories testing practices.
- The *Staphylococcus aureus* sensitivity surveillance program is currently under review by the TIPCU and Tasmanian HAI Advisory and Steering Committees.
- The manner in which VRE is reported is currently under review by the TIPCU and Tasmanian HAI Advisory and Steering Committees
- Tasmanian hand hygiene compliance rates continue to increase. Hand hygiene compliance before touching a patient, undertaking a procedure and after touching a patients' surrounding still remain lower than after touching a patient or undertaking a procedure. This trend is also reflected in other Australian and international data.
- The report now contains 'key points' at the end of each healthcare associated infection indicator.



Mr Brett Mitchell

TIPCU



Dr Alistair McGregor

Specialist Medical Advisor, TIPCU

* Bed day activity data used is correct at the time of printing. It is however, subject to change, due to the implementation of a new patient administration system. The bed day data used is consistent with previous quarters and therefore if any change is required, it is expected to be very minor.

* Bed day data for Hospital A for June-Sept 2010 is unavailable at the time of developing the report. The average separations over the past 12 months has been used to calculate the separation data for Hospital A in June. When data becomes available, the report will be updated.

Staphylococcus aureus bacteraemia (bloodstream infection)

Tasmanian Rate

Figure 1 and 2 (and tables contained in the Appendix) outline the Tasmanian rates of *Staphylococcus aureus* bacteraemia (all acute public hospitals combined).

The average (mean) rate of Healthcare Associated *Staphylococcus aureus* bacteraemia is 0.46 per 1000 separations (95% CI 0.37-0.55) or 1.54 per 10 000 patient care days (95% CI 1.24-1.85) (Figure 1).

The average (mean) rate of Community Associated *Staphylococcus aureus* bacteraemia is 0.55 per 1000 separations (95% CI 0.45-0.65) or 1.85 per 10 000 patient care days (95% CI 1.52-2.18) (Figure 2).

Figure 1 - Healthcare Associated *Staphylococcus aureus* bacteraemia

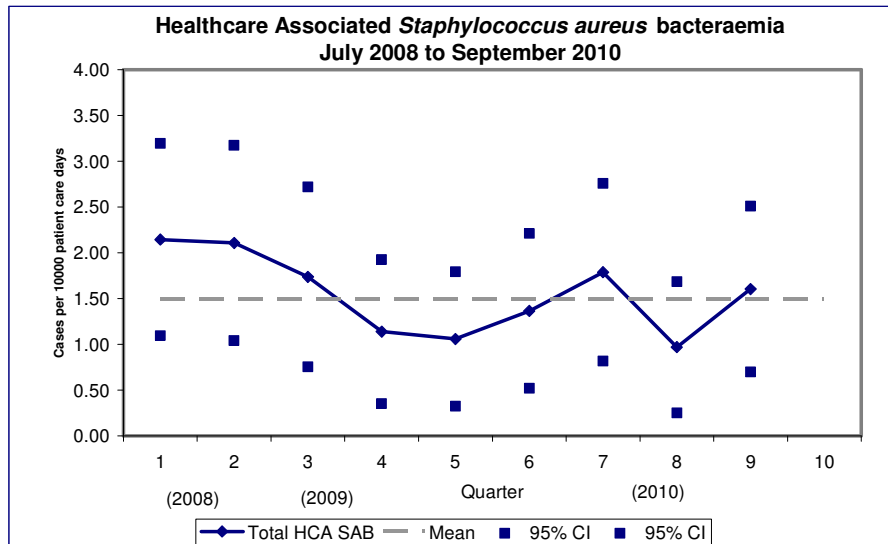
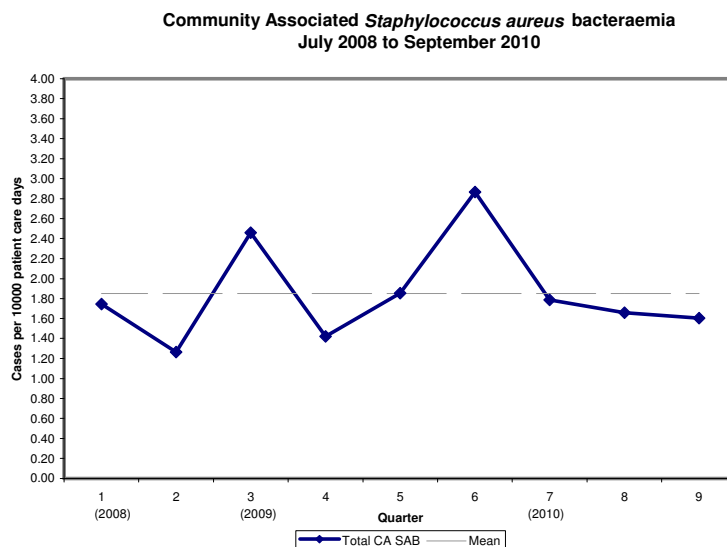


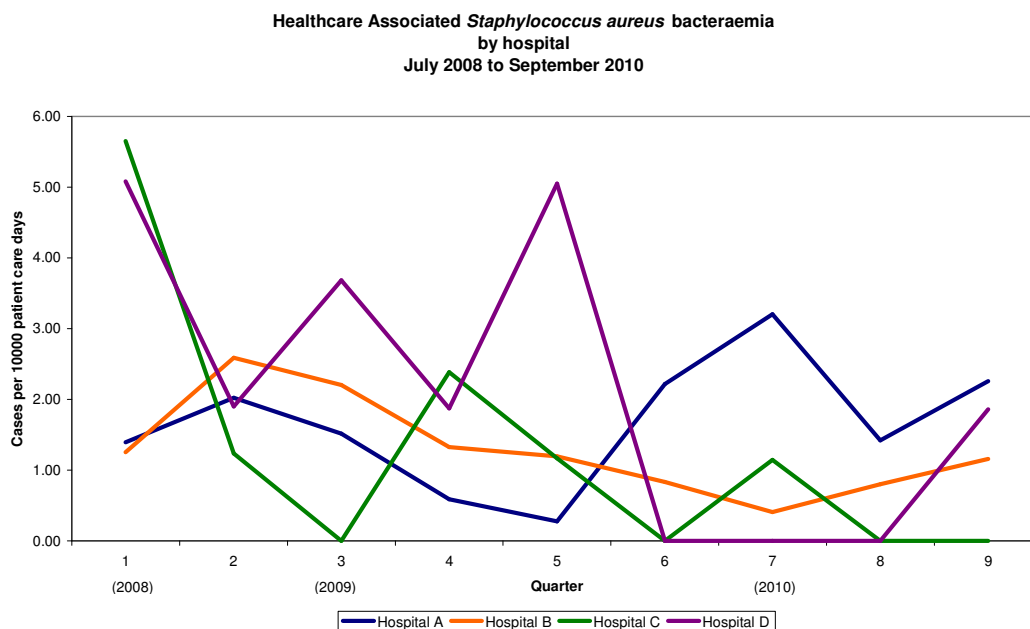
Figure 2 – Community Associated *Staphylococcus aureus* bacteraemia



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



Key Points

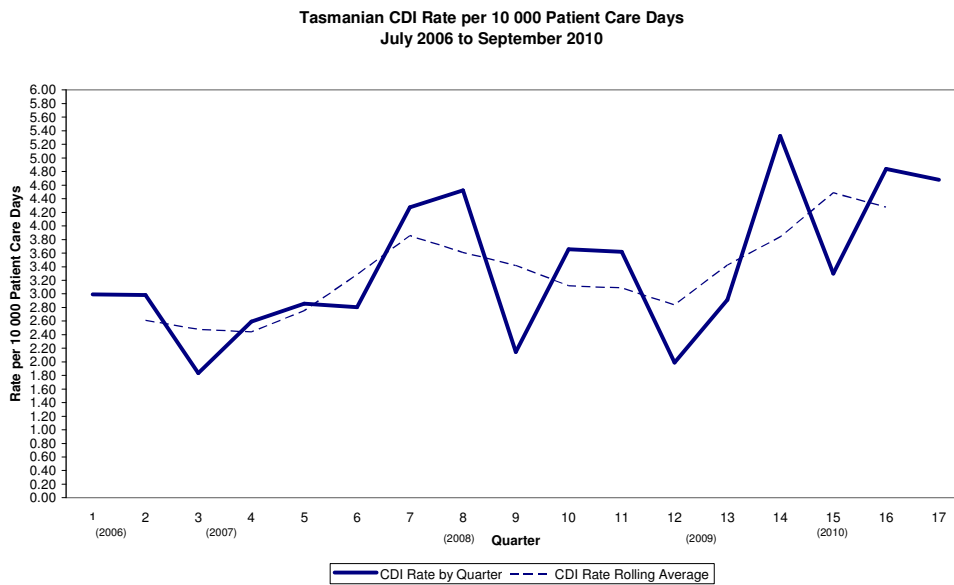
- The rate of healthcare associated (HCA) SAB is comparable to other Australian States
- The number of HCA MRSA bacteraemia cases has decreased since the introduction of the hand hygiene initiative.
- Tasmanian has a lower rate of HCA MRSA bacteraemia than many other Australia States. Only one HCA MRSA bacteraemia was reported in the past 12 months. For the period 2008/09, eight cases of HCA MRSA bacteraemia were reported. As MRSA bacteraemia has reported mortality of approximately 35%, this reduction demonstrates a significant improvement.
- The proportion of SAB that are MRSA are considerably lower than rates reported internationally.

Clostridium difficile Infection

Tasmanian Rate

Figure 4 (and tables contained in the Appendix) outlines the rate of *Clostridium difficile* infection for patients presenting to or in each of Tasmania’s acute public hospitals. The average (mean) rate of *Clostridium difficile* infection is 3.37 per 10 000 patient care days (95%CI 3.18-3.55) or 1.03 per 1000 separations (95% CI 1.00-1.06) as demonstrated in Figure 4.

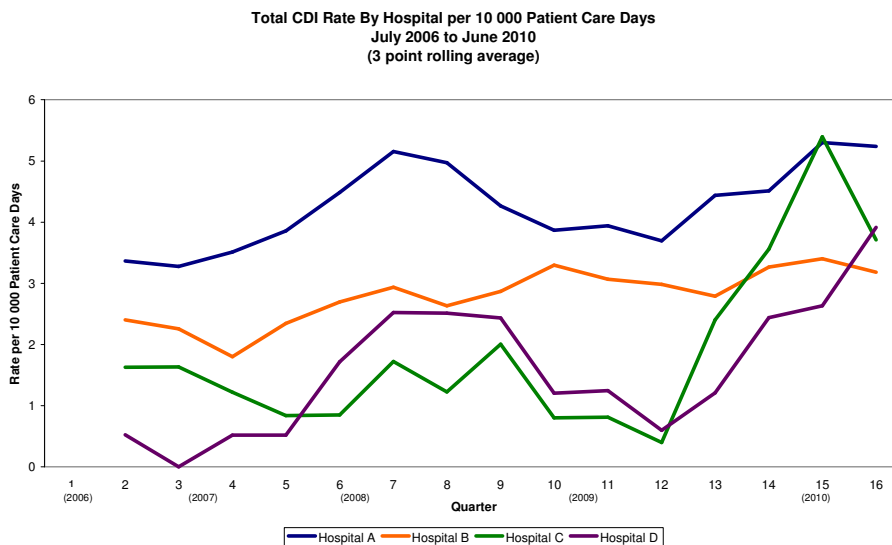
Figure 4 – Clostridium difficile Infection



Hospital Rates

Figure 5 (and tables contained in the Appendix) outlines the rate of *Clostridium difficile* infection in each of Tasmania’s acute public hospitals as demonstrated in Figure 5.

Figure 5 – Hospital Rates of Clostridium difficile Infection



Key Points

- The rate of CDI has significantly increased from 2008/09 to 2009/10. The rates for these two periods are 2.84 (2.51-3.17) and 3.88 (3.45-4.31) per 10 000 patient care days respectively
- To further investigate this increase, the TIPCU investigated the number of faecal specimens tested for *C.difficile* by each of the three microbiology laboratories serving the public hospitals in this study over the period 2008-09 to 2009-10, to determine if the increase was as a result of increased laboratory testing. No significant change was identified in the total number of tests each laboratory performed for CDI over this time. It was apparent however that laboratories differed widely in the frequency with which they looked for *Clostridium difficile* infection
- Laboratories do differ in the testing methodology for *C.difficile* and this may impact on the sensitivity and therefore detection of *C.difficile* infection. 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.
- The TIPCU are working with interstate counterparts and the ACSQHC in standardising the reporting of CDI, allowing for improved benchmarking
- 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.
- Tasmania is one of the only States who currently report and publish rates of CDI and have adopted national definitions for CDI.

Vancomycin Resistant Enterococcus (VRE)

Tasmanian Numbers

Table 1 – 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	27	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

* Total does not necessarily equal colonisation plus infection due to unknown cases; [^] Calendar year.

Hospital Numbers

Table 2 – Number of People Identified with VRE by Acute Public Hospital

Quarter		Hospital A		Hospital B		Hospital C		Hospital D	
		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

Col=Colonisation, Inf=Infection; * Total does not necessarily equal colonisation plus infection due to unknown cases

Key Points

- It is important to note that Table 2 identifies the hospital where VRE was found, not necessarily acquired.
- The number of cases of VRE identified in Tasmania are lower than many other Australian States
- VRE infection is of more clinical concern than colonisation.
- The TIPCU are 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.

Staphylococcus aureus Sensitivity

(NOT UPDATED FROM SURVEILLANCE REPORT NO 2)

Tasmanian Rate

Table 3 - Patients in Hospital > 48 hours

	2008	2009	2010
Total Number of Isolates Examined	295	268	Currently under review and not performed. This may be removed in future reports
Percentage of Staphylococcus aureus isolates that were MRSA	19.7 %	22.8%	
Number MSSA	237	207	
Number MRSA	58	61	
Mean Age	70.6 years	59.3 years	
Mean Time between Admission Date and Specimen Collection Date	19 days	15 days	

Table 4 - Patients in Hospital < 48 hours (all patients)

	2008	2009	2010
Total Number of Isolates Examined	1337	1228	Currently under review and not performed. This may be removed in future reports
Percentage of Staphylococcus aureus isolates that were MRSA	7.1%	9.9%	
Number MSSA	1242	1107	
Number MRSA	95	121	
Mean Age	52.9 years	46.5 years	

Hospital Rates

Table 5 - Patients in Hospital > 48 hours

	2008 % Isolates MRSA (total number examined in brackets*)	2009 % Isolates MRSA (total number examined in brackets*)	2010 % Isolates MRSA (total number examined in brackets*)
Hospital A	6% (100)	13% (100)	Currently under review and not performed. This may be removed in future reports
Hospital B	36% (100)	35% (100)	
Hospital C	19.7% (61)	26% (38)	
Hospital D	11.8% (34)	10.0%(30)	

- 100 consecutive isolates were included or 6 months of continuous data, whichever occurred first

Key Points

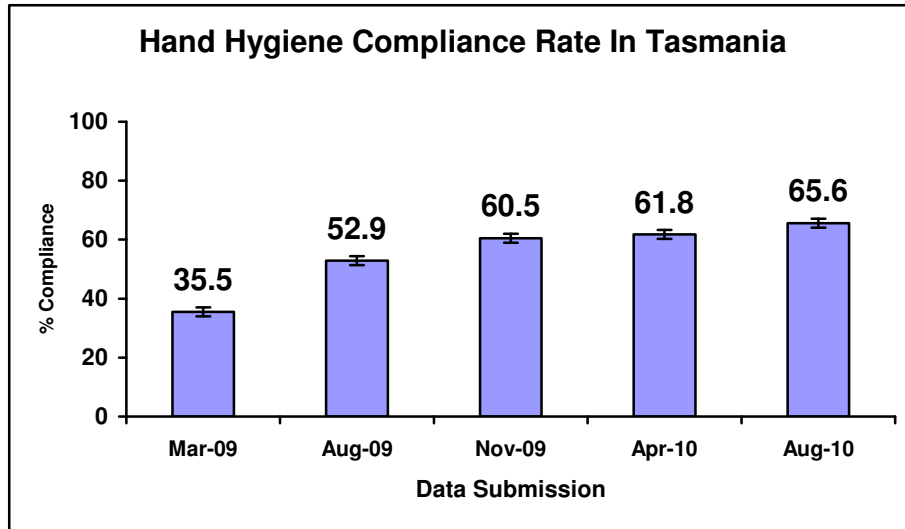
- The *Staphylococcus aureus* sensitivity surveillance program is designed to demonstrate a hospitals total MRSA burden, not to attribute cases of MRSA to a hospital.
- Blanket comparisons between hospitals are not recommended.
- The methodology used in this surveillance program is consistent with a program run for a number of years by the Australian Group on Antimicrobial Resistance (AGAR). The AGAR includes some of Australia's leading experts in the area of antimicrobial resistance (including MRSA). Results from the Tasmanian *Staphylococcus aureus* sensitivity surveillance program are consistent with findings from the AGAR.
- Overall, generally, Tasmania has a lower burden of MRSA than other Australian States.
- The Tasmanian *Staphylococcus aureus* sensitivity surveillance program is only undertaken once per year to ensure sufficient isolates are collected and analysed. It therefore may be considered unhelpful to report this surveillance program in quarterly reports.
- The current surveillance program provides a useful insight into epidemiological changes and occurrences at a State and regional level.
- The TIPCU are working with the Tasmanian HAI Advisory Group and Tasmanian HAI Steering Committee in reviewing this surveillance program and considering a new way to monitor and report MRSA, ensuring it is more meaningful at a hospital level

Hand Hygiene Compliance Data

Data is based on the 5th Hand Hygiene Data Submission, August 2010.

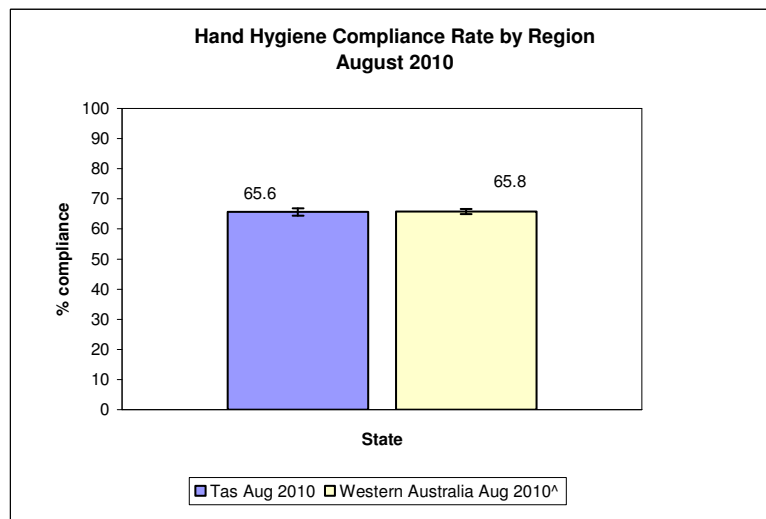
Tasmanian Rates

Hand Hygiene Compliance Rate in Tasmanian Public Hospitals (Figure 6)



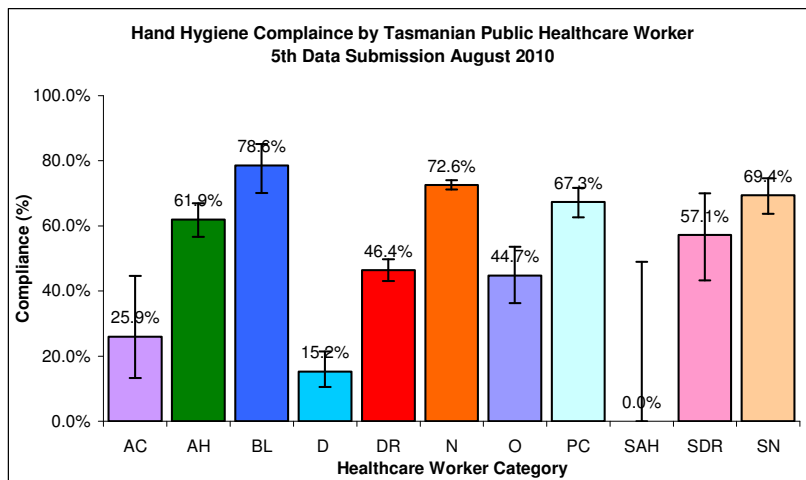
(all Tasmanian Public Hospitals)

Hand Hygiene Compliance Rate by State/Territory (Figure 7)



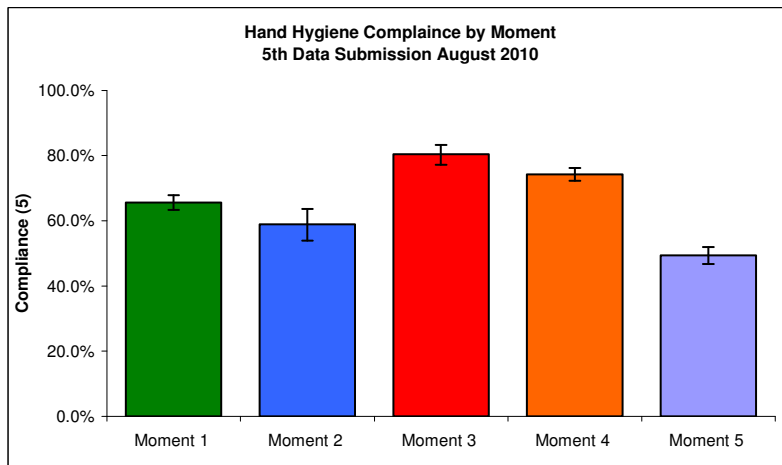
^ HISWA Report No.20 – includes all hospitals (including private)
Tasmanian rate is for public hospitals only.

Hand Hygiene Compliance by Healthcare Worker (Figure 8)



Key	
AC	Clerical
AH	Allied Health
BL	Invasive technician
D	Domestic
DR	Doctor
N	Nurse/Midwife
O	Other
PC	Personal care staff
SAH	Student Allied Health
SDR	Student Doctor
SN	Student Nurse/Midwife

Hand Hygiene Compliance by Moment (Figure 9)

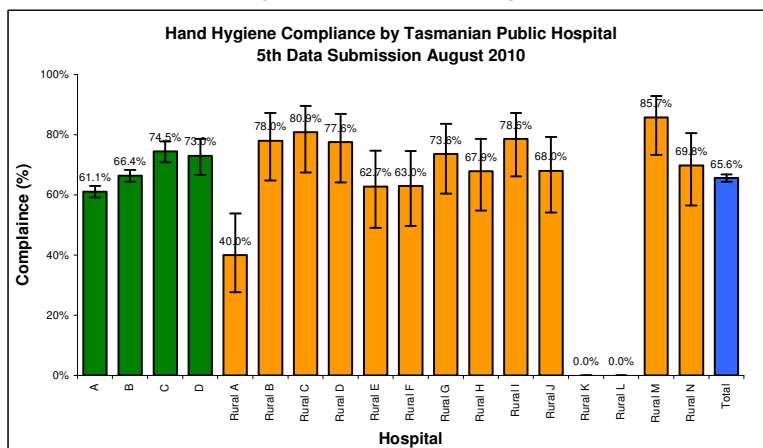


Key	
Moment 1	– Before touching a patient
Moment 2	– Before a procedure
Moment 3	– After a procedure or body fluid exposure
Moment 4	– After touching a patient
Moment 5	– After touching a patients' surroundings

Hospital Rates

Hand Hygiene Compliance Rate by Hospital (Figure 10)

Please Note – Rural hospitals audit considerably less moments



Key Points

- The rate of hand hygiene compliance has increased during each reported period from in March 2009 (baseline) to 65.6% in the latest report (August 2010).
- Hand hygiene compliance before touching a patient, undertaking a procedure and after touching a patients' surrounding still remain lower than that reported after touching a patient or undertaking a procedure. This trend is also reflected in other Australian and international data
- The rate of hand hygiene compliance in Tasmanian is comparable to that of other States.

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 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 1 – Tasmanian Numbers and Rates of *Staphylococcus aureus* bacteraemia
(July 2008 to Sept 2010)**

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

* Rate is the number of patients per 10 000 Patient Care Days

**Table 2 – Hospital A - Numbers and Rates of *Staphylococcus aureus* bacteraemia
(July 2008 to Sept 2010)**

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	5	1.39	5	1.39	0	0.00	2	0.56	6	1.67
Q4 2008	7	2.02	5	1.44	2	0.58	1	0.29	4	1.16
Q1 2009	5	1.52	2	0.61	3	0.91	1	0.30	4	1.21
Q2 2009	2	0.59	2	0.59	0	0.00	1	0.29	1	0.29
Q3 2009	1	0.28	1	0.28	0	0.00	0	0	7	1.95
Q4 2009	8	2.22	5	1.39	3	0.83	0	0	6	1.67
Q1 2010	11	3.20	6	1.75	5	1.46	0	0	2	0.58
Q2 2010	5	1.42	3	0.85	2	0.57	0	0	5	1.42
Q3 2010	8	2.26	7	1.98	1	0.28	1	0.28	4	1.13

* Rate is the number of patients per 10 000 Patient Care Days

**Table 3 – Hospital B - Numbers and Rates of *Staphylococcus aureus* bacteraemia
(July 2008 to Sept 2010)**

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	3	1.25	0	0.00	3	1.25	1	0.42	3	1.25
Q4 2008	6	2.59	3	1.29	3	1.29	1	0.43	2	0.86
Q1 2009	5	2.21	3	1.32	2	0.88	1	0.44	8	3.53
Q2 2009	3	1.33	1	0.44	2	0.88	0	0.00	6	2.65
Q3 2009	3	1.20	1	0.40	2	0.80	1	0.40	4	1.59
Q4 2009	2	0.83	2	0.83	0	0.00	0	0.00	12	5.00
Q1 2010	1	0.41	1	0.41	0	0.00	0	0.00	8	3.27
Q2 2010	2	0.80	2	0.80	0	0.00	0	0.00	2	0.80
Q3 2010	3	1.16	2	0.77	1	0.39	0	0.00	2	0.77

* Rate is the number of patients per 10 000 Patient Care Days

**Table 4 – Hospital C - Numbers and Rates of *Staphylococcus aureus* bacteraemia
(July 2008 to Sept 2010)**

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	5	5.65	3	3.39	2	2.26	0	0.00	1	1.13
Q4 2008	1	1.24	1	1.24	0	0.00	0	0.00	1	1.24
Q1 2009	0	0.00	0	0.00	0	0.00	0	0.00	4	4.97
Q2 2009	2	2.38	0	0.00	2	2.38	0	0.00	3	3.58
Q3 2009	1	1.17	0	0.00	1	1.17	0	0.00	2	2.33
Q4 2009	0	0.00	0	0.00	0	0.00	0	0.00	2	2.50
Q1 2010	1	1.15	1	1.15	0	0.00	0	0.00	2	2.29
Q2 2010	0	0.00	0	0.00	0	0.00	0	0.00	2	2.71
Q3 2010	0	0.00	0	0.00	0	0.00	0	0.00	4	4.91

* Rate is the number of patients per 10 000 Patient Care Days

**Table 5 – Hospital D - Numbers and Rates of *Staphylococcus aureus* bacteraemia
(July 2008 to Sept 2010)**

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	3	5.08	3	5.08	0	0.00	0	0.00	3	5.08
Q4 2008	1	1.90	1	1.90	0	0.00	0	0.00	2	3.80
Q1 2009	2	3.68	1	1.84	1	1.84	0	0.00	1	1.84
Q2 2009	1	1.87	0	0.00	1	1.87	0	0.00	0	0.00
Q3 2009	3	5.05	3	5.05	0	0.00	0	0.00	1	1.68
Q4 2009	0	0.00	0	0.00	0	0.00	0	0.00	1	1.91
Q1 2010	0	0.00	0	0.00	0	0.00	0	0.00	1	1.92
Q2 2010	0	0.00	0	0.00	0	0.00	0	0.00	3	6.32
Q3 2010	1	1.86	0	0.00	1	1.86	0	0.00	2	3.72

* Rate is the number of patients per 10 000 Patient Care Days

***Clostridium difficile* Infection**

**Table 6 – Numbers and Rates of *Clostridium difficile* infection
(July 2006 to Sept 2010)**

Quarter	Total patients	Rate per 10 000 patient care days	Rate per 1000 separations
Q3 2006	22	2.99	0.98
Q4 2006	22	2.99	0.99
Q1 2007	13	1.83	0.59
Q2 2007	19	2.59	0.84
Q3 2007	22	2.86	0.92
Q4 2007	20	2.80	0.87
Q1 2008	29	4.27	1.30
Q2 2008	32	4.52	1.38
Q3 2008	16	2.15	0.65
Q4 2008	26	3.65	1.03
Q1 2009	25	3.62	1.03
Q2 2009	14	1.99	0.55
Q3 2009	22	2.9	0.9
Q4 2009	39	5.3	1.6
Q1 2010	24	3.3	1.0
Q2 2010	35	4.8	1.5
Q3 2010	35	4.7	1.5

**Table 7 – Hospital Numbers and Rates of *Clostridium difficile* infection
(July 2006 to Sept 2010)**

Quarter	Hospital A		Hospital B		Hospital C		Hospital D	
	Total patients	Rate*	Total patients	Rate*	Total patients	Rate*	Total patients	Rate*
Q3 2006	15	4.2	6	2.6	0	0.0	1	1.5
Q4 2006	14	4.0	6	2.5	2	2.5	0	0.0
Q1 2007	6	1.8	5	2.1	2	2.4	0	0.0
Q2 2007	14	4.0	5	2.1	0	0.0	0	0.0
Q3 2007	17	4.6	3	1.2	1	1.2	1	1.5
Q4 2007	10	2.9	9	3.8	1	1.3	0	0.0
Q1 2008	20	5.9	7	3.2	0	0.0	2	4.2
Q2 2008	23	6.6	4	1.8	3	3.8	2	3.8
Q3 2008	9	2.5	7	2.9	0	0.0	0	0.0
Q4 2008	13	3.8	9	3.9	2	2.5	2	3.8
Q1 2009	18	5.5	7	3.1	0	0.0	0	0.0
Q2 2009	9	2.7	5	2.2	0	0.0	0	0.0
Q3 2009	11	3.1	9	3.6	1	1.2	1	1.7
Q4 2009	27	7.5	6	2.5	5	6.3	1	1.9
Q1 2010	10	2.9	9	3.7	3	3.4	2	3.8
Q2 2010	19	5.4	10	4.0	5	6.8	1	2.1
Q3 2010	26	7.3	5	1.9	1	1.2	3	5.6

* per 10 000 patient care days

***Staphylococcus aureus* Sensitivity Data**

A range of analysis was undertaken on the *Staphylococcus aureus* sensitivity data. A summary of other findings include:

- There is a significant variation between hospitals and the in proportion of MRSA isolates. Isolates from Hospital A were more likely to be MSSA ($p=0.004$) whereas isolates from Hospital B were more likely to be MRSA ($p<0.001$)
- A patient's place of residence within Tasmania was also associated with the type of isolate detected, with patients from the Northern region being more likely to be positive for MRSA ($p<0.001$)
- Specimens taken from males were about twice as likely to be MRSA positive than those from females ($p=0.017$)
- Comparing specimens in patients who were in hospital less than and more than 48 hours, revealed that patients resident in hospital less than 48 hours were statistically less likely to be positive for MRSA than patients in hospital greater than 48 hours ($p<0.001$)
 - Data from patients in hospital less than 48 hours was de-duplicated using the same methodology as those in hospital more than 48 hours

Hand Hygiene Compliance Data (August 2010)

Table 8 – Hand hygiene compliance rates by Tasmanian hospital and State level

Hospital	Hand Hygiene Compliance Rate	Lower 95% Confidence	Upper 95% Confidence
A	61.1%	59.2%	62.9%
B	66.4%	64.4%	68.3%
C	74.5%	70.8%	77.8%
D	73.0%	66.6%	78.7%
Rural A	40.0%	27.6%	53.8%
Rural B	78.0%	64.8%	87.2%
Rural C	80.9%	67.5%	89.6%
Rural D	77.6%	64.1%	87.0%
Rural E	62.7%	49.0%	74.7%
Rural F	63.0%	49.6%	74.6%
Rural G	73.6%	60.4%	83.6%
Rural H	67.9%	54.8%	78.6%
Rural I	78.6%	66.2%	87.3%
Rural J	68.0%	54.2%	79.2%
Rural K	No data submitted	No data submitted	No data submitted
Rural L	No data submitted	No data submitted	No data submitted
Rural M	85.7%	73.3%	92.9%
Rural N	69.8%	56.5%	80.5%
Tasmanian Rate	65.6%	64.4%	66.8%

Table 9 – Tasmanian hand hygiene compliance rates by healthcare worker

Healthcare Worker Code	Healthcare Worker	Hand Hygiene Compliance Rate	Lower 95% confidence	Upper 95% Confidence
AC	Clerical	25.9%	13.2%	44.7%
AH	Allied Health	61.9%	56.6%	67.0%
BL	Invasive technician	78.6%	70.1%	85.2%
D	Domestic	15.2%	10.5%	21.4%
DR	Doctor	46.4%	43.1%	49.8%
N	Nurse/Midwife	72.6%	71.2%	74.0%
O	Other	44.7%	36.2%	53.5%
PC	Personal care staff	67.3%	62.7%	71.6%
SAH	Student Allied Health	0.0%	0.0%	49.0%
SDR	Student Doctor	57.1%	43.3%	70.0%
SN	Student Nurse/Midwife	69.4%	63.6%	74.6%

Table 10 – Tasmanian hand hygiene compliance rates by moment

Moment	Hand Hygiene Compliance Rate	Lower 95% confidence	Upper 95% Confidence
1	65.6%	63.3%	67.9%
2	58.9%	53.9%	63.7%
3	80.4%	77.2%	83.3%
4	74.3%	72.3%	76.2%
5	49.4%	46.8%	51.9%



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Division of Population Health
**Department of Health and
Human Services**

**Editors: Brett Mitchell, Dr
Alistair McGregor, Anne Wells
& Saffron Brown**

GPO Box 125, Hobart 7001

Ph: 6222 7779

Fax: 6233 0553

Email: tipcu@dhhs.tas.gov.au