

HISWA

Healthcare Infection Surveillance Western Australia

Quarterly Aggregate Report

Quarter 2 2011 – Number 24

HISWA News

- This aggregate report contains inaugural HISWA data on SSIs following caesarean section procedures. Seventeen hospitals submitted data for this first reporting period. Hospitals submitting data included 5 metropolitan (2 private and 3 public) and 12 from regional areas (1 private and 11 public).
- In collaboration with the Infection & Immunology and Musculoskeletal Health Networks, the HAIU is forming an expert advisory group to develop evidence based guidelines for the prevention of SSI in arthroplasty, for inclusion in the *WA Elective Joint Replacement Model of Care*. We will keep you updated on this initiative and consultation with HISWA contributors will be essential.
- The Australian Commission on Safety and Quality in Healthcare (ACSQHC) continues to progress work on healthcare associated infections. The HAIU has been contributing to the HAI Technical Working Group, to develop implementation guides for HA-SABSI, Hospital CDI and Adult ICU CLABSI. These will be available on the Commissions website.

Quarter 2 Highlights

- There were reductions in reported rates for both hip and knee arthroplasty this quarter.
- There was a reduction in the haemodialysis access-associated BSI rate attributed to cuffed catheters this quarter. There were 6 cuffed catheter BSIs reported compared to 18 in Qtr 1 2011.

Quarter 2 Concerns

- The burden of Hospital CDI identified in our tertiary hospitals continues to rise.
- Intravascular devices continue to be the most frequently (56%) identified source of HA-SABSI.

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Data notes for Qtr 2, 2011

- Peel Health Campus and Armadale/Kelmscott Hospital unable to provide caesarean SSI data for June
- SCGH unable to provide hip and knee SSI data for June

Data Extraction: 22 August 2011


Publication Date: 24 August 2011

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Surgical Site Infection

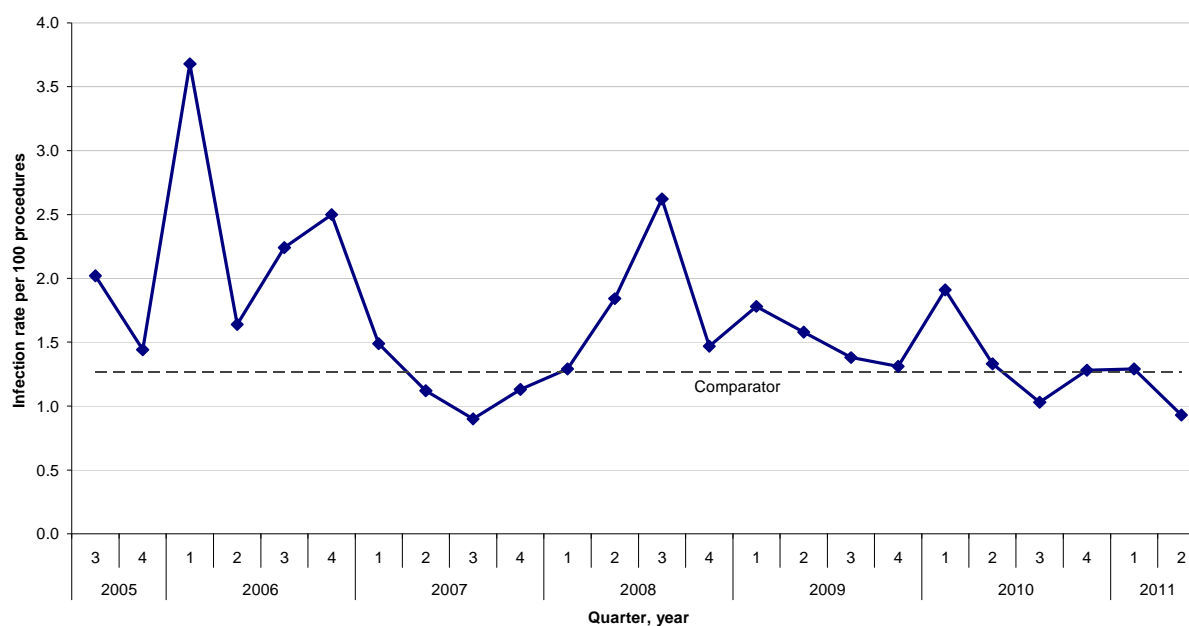
Hip arthroplasty SSI

	No. of contributing hospitals	No. of procedures	No. SSI	Aggregate rate (95% CI)	Cumulative aggregate (95% CI)	Comparator rate [1]
Hip arthroplasty risk all (for hospitals with <100 procedures)	7	68	2	2.99 (0.27 – 11.00)	0.85 (0.41 – 1.71)	Unavailable
Hip arthroplasty risk index 0	13	453	2	0.44 (0.02 – 1.73)	1.04 (0.85 – 1.27)	0.67
Hip arthroplasty risk index 1	13	218	3	1.38 (0.30 – 4.20)	2.41 (1.99 – 2.91)	1.44
Hip arthroplasty risk index 2	13	12	0	0.00 (0.00 – 28.71)	6.48 (4.61 – 9.04)	2.40
Hip arthroplasty risk index 3	13	0	0	0.00 (0.00 – 0.00)	22.22 (5.68 – 55.86)	Unavailable
Total Hip arthroplasty	20	751	7	0.93 (0.42 – 1.97)	1.62 (1.43 – 1.84)	1.27

Rate per 100 procedures

[1] NHSN

Aggregate Hip Arthroplasty SSI Rate



Comment

The total hip SSI rate decreased this quarter, with 0.93 infections per 100 procedures reported, compared to 1.29 infections per 100 procedures in Qtr 1 2011. This is below the international comparator rate. The cumulative aggregate rate of 1.62 infections per 100 procedures for all hip arthroplasty remains above the comparator rate.

Surgical Site Infection

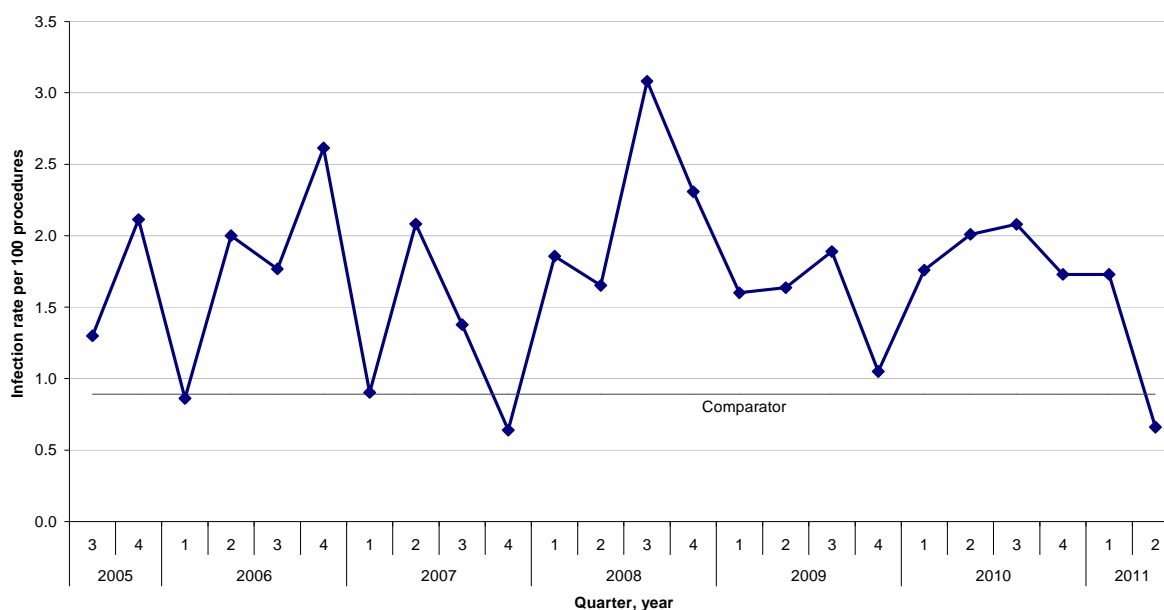
Knee arthroplasty SSI

	No. of contributing hospitals	No. of procedures	No. SSI	Aggregate rate (95% CI)	Cumulative aggregate (95% CI)	Comparator rate [1]
Knee arthroplasty risk all (for hospitals with <100 procedures)	7	122	2	1.64 (0.11 – 6.24)	2.42 (1.75 – 3.33)	Unavailable
Knee arthroplasty risk index 0	13	702	3	0.43 (0.09 – 1.33)	1.20 (1.02 – 1.41)	0.58
Knee arthroplasty risk index 1	13	352	2	0.57 (0.03 – 2.22)	2.08 (1.74 – 2.48)	0.99
Knee arthroplasty risk index 2	13	35	1	2.86 (0.00 – 16.06)	5.35 (3.90 – 7.32)	1.60
Knee arthroplasty risk index 3	13	0	0	0.00 (0.00 – 0.00)	0.00 (0.00 – 44.79)	Unavailable
Total Knee arthroplasty	20	1,211	8	0.66 (0.32 – 1.33)	1.69 (1.52 – 1.88)	0.89

Rate per 100 procedures

[1] NHSN

Aggregate Knee Arthroplasty SSI Rate



Comment

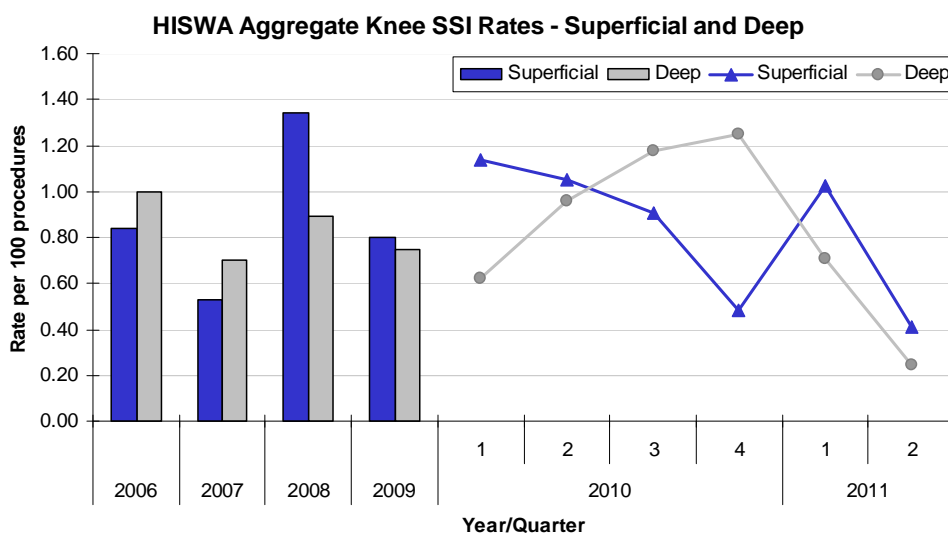
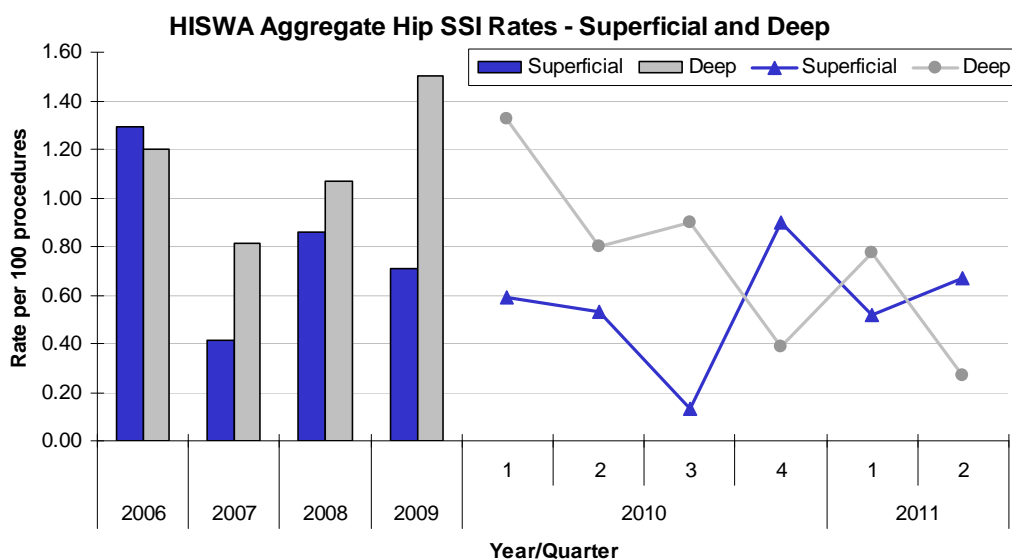
The total knee SSI rate decreased this quarter, with 0.66 infections per 100 procedures reported, compared to 1.73 infections per 100 procedures in Qtr 1 2011. This is below the international comparator for the first time since Qtr 4, 2007. The cumulative aggregate rate of 1.69 infections per 100 procedures for all knee arthroplasty remains above the comparator rate.

Surgical Site Infection

SSI – rates stratified by superficial and deep/organ space infections – Q2 2011

	No. superficial infections	No. deep infections	Total no. infections	No. procedures	Aggregate superficial SSI rate (95%CI)	Aggregate deep SSI rate (95%CI)	Aggregate total SSI rate (95%CI)
Hip Arthroplasty	5	2	7	751	0.67 (0.24 – 1.61)	0.27 (0.01 – 1.05)	0.93 (0.42 – 1.97)
Knee Arthroplasty	5	3	8	1,211	0.41 (0.15 – 1.00)	0.25 (0.05 – 0.77)	0.66 (0.32 – 1.33)
Total	10	5	15	1,962	0.51 (0.27 – 0.95)	0.25 (0.09 – 0.62)	0.76 (0.46 – 1.27)

SSI – quarterly rates stratified by superficial and deep/organ space infections



Surgical Site Infection

Caesarean section SSI

	No. of contributing hospitals	No. of procedures	No. Super SSI	No. Deep SSI	Total No. SSI	Total aggregate rate (95% CI)	Cumulative aggregate (95% CI)	Comparator rate [6]
C-Section risk all	12	354	1	0	1	0.28 (0.00 – 1.78)	0.28 (0.00 – 1.78)	Unavailable
C-Section risk index 0	5	159	0	0	0	0.00 (0.00 – 2.92)	0.00 (0.00 – 2.92)	Unavailable
C-Section risk index 1	5	109	1	0	1	0.92 (0.00 – 5.62)	0.92 (0.00 – 5.62)	Unavailable
C-Section risk index 2	5	1	0	0	0	0.00 (0.00 – 82.94)	0.00 (0.00 – 82.94)	Unavailable
C-Section risk index 3	5	0	0	0	0	0.00 (0.00 – 0.00)	0.00 (0.00 – 0.00)	Unavailable
Total inpatient C-Section SSI	17	623	2	0	2	0.32 (0.01 – 1.26)	0.32 (0.01 – 1.26)	0.51 (0.47 – 0.54)
Total post-discharge C-Section SSI	17	623	7	0	7	1.12* (0.50 – 2.37)	1.12* (0.50 – 2.37)	Unavailable
Total C-Section SSI	17	623	9	0	9	1.44* (0.73 – 2.78)	1.44* (0.73 – 2.78)	Unavailable

Rate per 100 procedures

[6] ACHS 2006 – 2009

* These rates are not to be used for benchmarking purposes.

Comment

17 hospitals reported caesarean section data for Qtr 2 2011. Of the 623 procedures included in the surveillance, 316 were elective and 307 were classified as emergency procedures. A total of 9 superficial SSI were reported, with the majority (77%) being detected by outpatient or post discharge surveillance. Of these 9 infections, 5 were detected in patients undergoing emergency caesarean sections. The majority of hospitals are not stratifying by risk index due to low numbers of procedures (<100 annually).

Studies have shown that the majority of SSI following Caesarean sections are superficial and are detected post-discharge in outpatient settings. In WA post-discharge SSI are mainly detected by ad-hoc methods and only three hospitals conduct formal post-discharge surveillance with low survey response rates (33-50%). Therefore, reported rates that include post-discharge SSI are likely to be an underestimation of true rates.

Healthcare Associated MRSA Infection

Inpatient and non-inpatient MRSA rates

	No. of contributing hospitals	No. of MRSA Infections	No. of bed-days	Aggregate rate (95% CI)	Cumulative aggregate (95% CI)	Comparator rate [2]
MRSA ICU sterile site	10	0	12,796	0.00 (0.00 – 3.73)	0.46 (0.28 – 0.76)	2.52
MRSA ICU non-sterile site	10	5	12,796	3.91 (1.42 – 9.52)	1.48 (1.13 – 1.95)	5.20
MRSA Non-ICU sterile site	45	12	439,234	0.27 (0.15 – 0.49)	0.23 (0.20 – 0.26)	0.30
MRSA Non-ICU non-sterile site	45	24	439,234	0.55 (0.36 – 0.82)	0.63 (0.58 – 0.68)	1.30
Total in-patient MRSA HAI	45	41	452,030	0.91* (0.67 – 1.24)	0.90* (0.84 – 0.96)	1.42[#]
MRSA HAI non-inpatient	45	6	NA	NA	NA	Unavailable
Total MRSA Healthcare Associated Infection	45	47	564,182	0.83[†] (0.63 – 1.11)	NA	Unavailable

* Rate per 10,000 multi-day bed-days; [†] Rate per 10,000 multi- and same-day bed-days; [#] Rate per 10,000 patient days [2] SAICS

MRSA by strain analysis for this quarter

MRSA Strains Causing Healthcare Associated Infections (All isolates)	Count	Percentage
WA CA-MRSA (WA clones)	35	74%
Imported CA-MRSA (Qld Clone, USA 300, WSPP, Bengal Bay)	4 (Qld Clone)	9%
Hospital-associated MRSA (AUS clones, UK clones, NY/JAPAN)	7 (UK 15)	15%

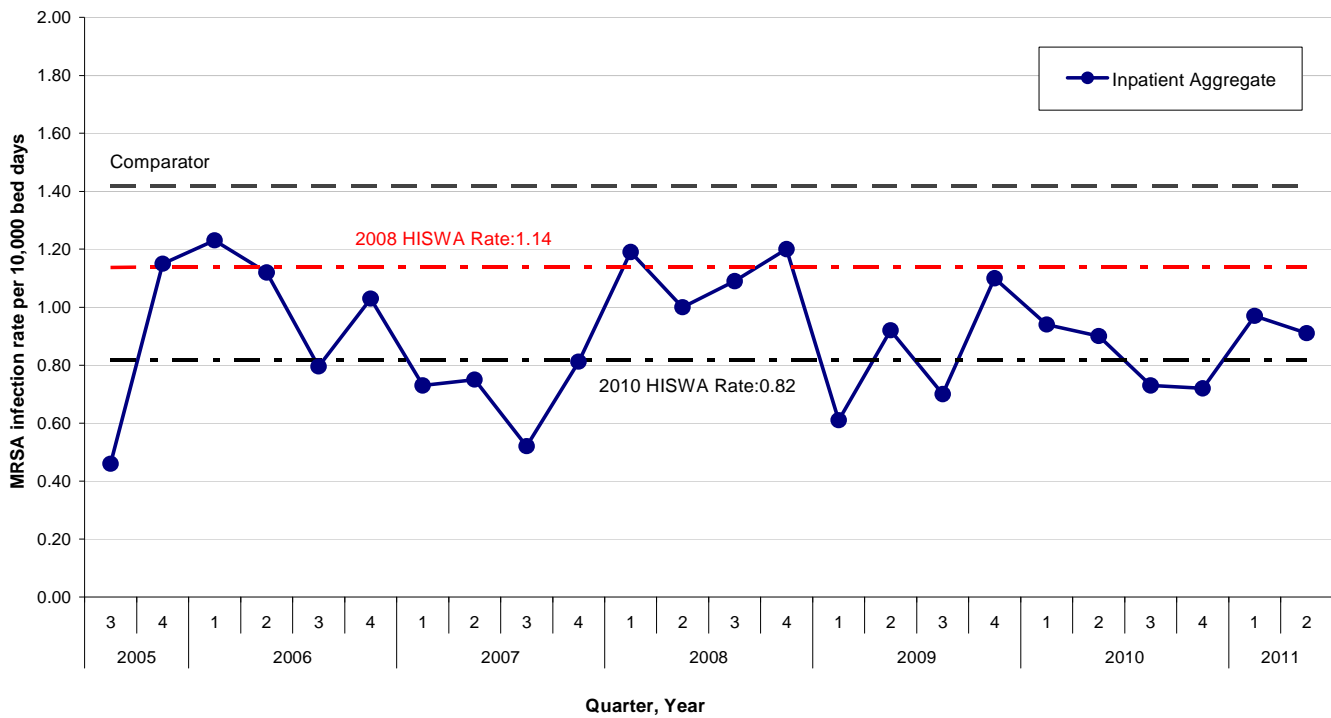
MRSA by place of detection for this quarter

Detected	WA CA-MRSA	Imported CA-MRSA	Hospital-associated MRSA	Total
ICU Sterile	0	0	0	0
ICU Non-Sterile	4	0	1	5
Non ICU Sterile	9	2	1	12
Non ICU Non-Sterile	17	2	4	24 (1 untyped)
Non-inpatient	5	0	1	6
Total	35	4	7	47

Healthcare Associated MRSA Infection

MRSA healthcare associated infections attributed to inpatient care

Aggregate Inpatient Healthcare Associated MRSA infections



Comment

The majority (87.2%) of all MRSA HAIs were reported from the inpatient setting, and of these, 51% occurred in the non-ICU setting and from non-sterile sites.

The inpatient MRSA HAI rate decreased this quarter, with 0.91 infections per 10,000 bed days reported, compared to 0.97 infections per 10,000 bed days in Qtr 1 2011. This remains above the HISWA 2010 aggregate rate, but still below the comparator.

The majority (74%) of MRSA HAIs were caused by MRSA strains that are endemic in the WA community, The numbers and percentage of MRSA HAI caused by imported CA-MRSA strains decreased from 6 (14%) in Qtr 1 2011 to 4 (9%) this quarter. The number and percentage of hospital-associated strains (all UK 15) causing MRSA infections remained stable at 7 (15%) this quarter.

Hospital Clostridium difficile Infection

Clostridium difficile rates by hospital group

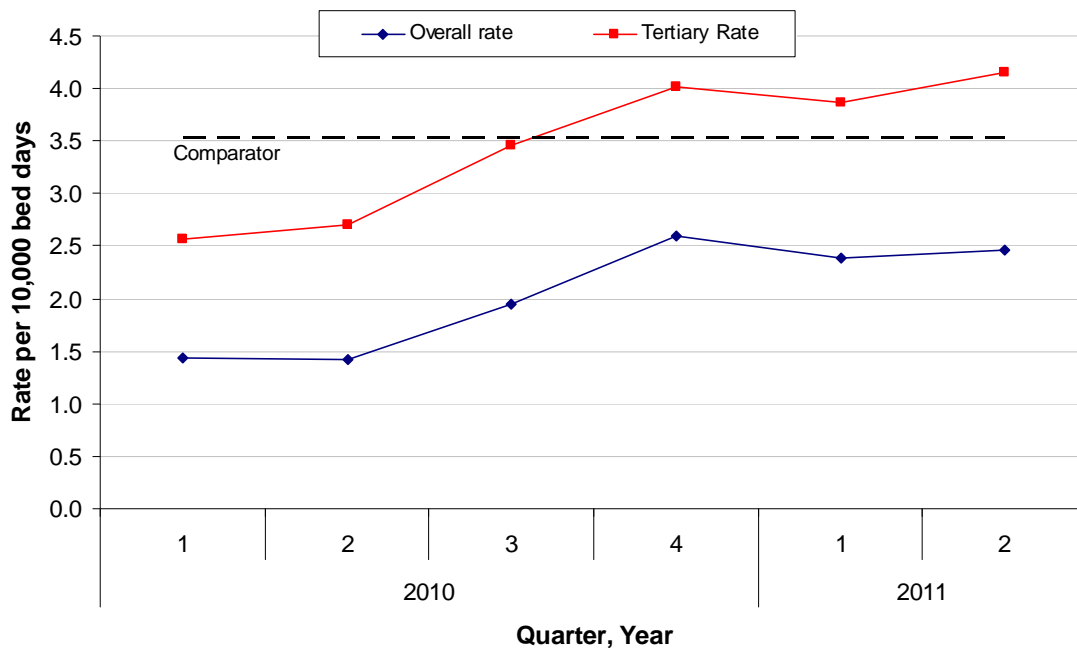
Hospital Type	No. of contributing hospitals	No. of C. Diff infections this quarter	No. of bed-days	Aggregate rate (95% CI)	Cumulative aggregate (95% CI)	Comparator rate [3]
Tertiary	5	101	243,149	4.15 (3.42 – 5.05)	3.47 (3.18 – 3.79)	N/A
Metropolitan non-tertiary	8	20	129,940	1.54 (0.99 – 2.40)	1.32 (1.08 – 1.61)	N/A
WACHS	21	9	63,560	1.42 (0.71 – 2.75)	0.86 (0.60 – 1.23)	N/A
Private	8	3	103,012	0.29 (0.06 – 0.91)	0.34 (0.22 – 0.53)	N/A
Total	42	133	539,661	2.46* (2.08 – 2.92)	2.06* (1.90 – 2.22)	3.54#

* Rate per 10,000 multi- and same-day bed-days (including psychiatric bed-days)

[3] Tasmanian HAI Report

Rate per 10,000 patient days

Aggregate Clostridium Difficile Infection Rate



Comment

The HISWA aggregate rate increased this quarter, with 2.46 infections per 10,000 bed days reported, compared to 2.41 infections per 10,000 bed days in Qtr 1 2011. The majority of Hospital *Clostridium difficile* infections (72%) were reported from the three adult tertiary public hospitals. The tertiary hospital CDI rate has increased since data collection commenced. Public hospital data for January to June 2011 is currently being validated.

Haemodialysis Access-associated Bloodstream Infection

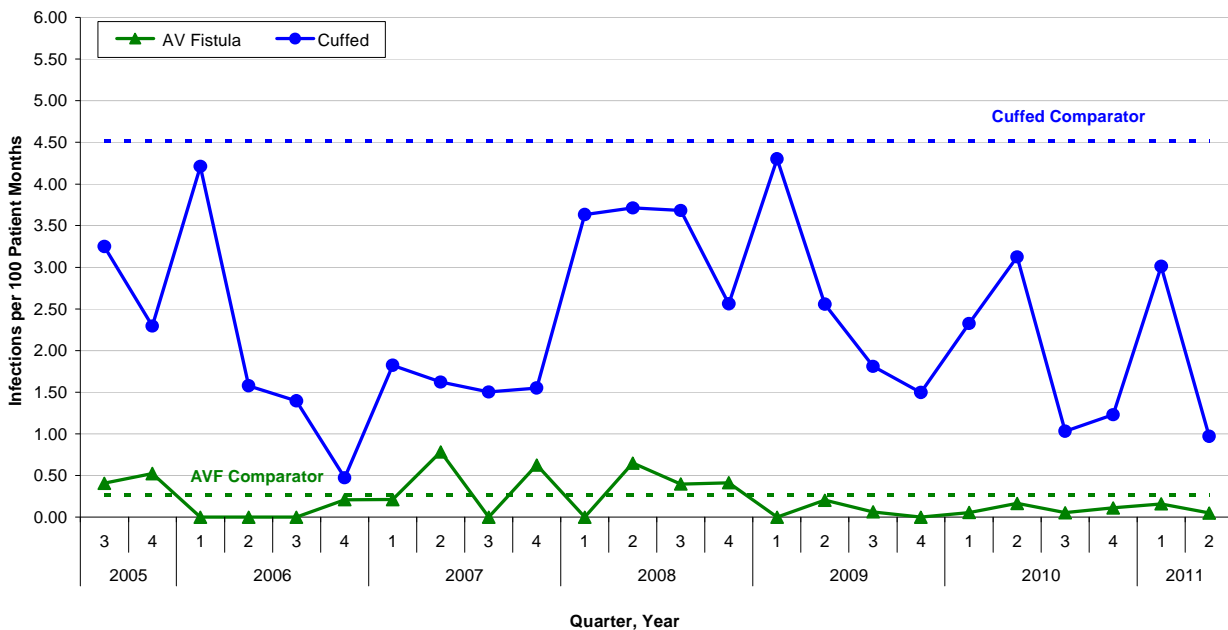
Haemodialysis associated bloodstream infection by type of access

	No. of contributing haemodialysis units	Aggregate access utilisation ratio (%)	No. of BSI	No. of patient months	Aggregate rate this Qtr (95% CI)	Cumulative aggregate (95% CI)	Comparator rate [4,5]
AV fistula BSI	20	72%	1	1,901	0.05 (0.00 – 0.34)	0.13 (0.09 – 0.19)	0.26
AV graft BSI synthetic and native vessel graft	20	3%	0	91	0.00 (0.00 – 4.99)	0.71 (0.35 – 1.37)	0.67
Cuffed catheter BSI	20	24%	6	619	0.97 (0.40 – 2.17)	2.16 (1.88 – 2.50)	4.51
Non-cuffed catheter-associated BSI	20	<1%	0	18	0.00 (0.00 – 21.10)	3.27 (1.66 – 6.22)	7.76

Rate per 100 patient months

[4, 5] Klevens, R.M et al

Aggregate Haemodialysis Associated BSI: Cuffed Catheter and AV Fistula



Comment

The majority (72%) of patients received haemodialysis via an AV fistula, which was similar to the ratio in Qtr 1 2011 (73%). The rate of AV fistula infections remains low and has been below the comparator rate since Qtr 1 2009. The rate of cuffed catheter associated BSI has decreased this quarter, with 0.97 infections per 100 patient-months reported, compared to 3.01 infections per 100 patient-months in Qtr 1 2011. This remains below the comparator.

Central Line Associated Bloodstream Infection (CLABSI)

Haematology unit CLABSI

	No. of contributing hospitals	No. of line days	No. of CLABSI	Aggregate rate (95% CI)	Cumulative aggregate (95% CI)	Comparator rate
Haematology peripherally inserted CLABSI	2	2,397	3	1.25 (0.26 – 3.91)	2.65 (2.14 – 3.30)	Unavailable
Haematology centrally inserted CLABSI	2	1,067	1	0.94 (0.00 – 5.97)	4.19 (3.43 – 5.14)	Unavailable
Haematology total CLABSI	2	3,464	4	1.15 (0.35 – 3.11)	3.31 (2.85 – 3.84)	Unavailable

Rate per 1,000 central line days

Oncology Unit CLABSI

	No. of contributing hospitals	No. of line days	No. of CLABSI	Aggregate rate (95% CI)	Cumulative aggregate (95% CI)	Comparator rate
Oncology peripherally inserted CLABSI	2	466	0	0.00 (0.00 – 10.14)	0.16 (0.03 – 0.50)	Unavailable
Oncology centrally inserted CLABSI	2	102	0	0.00 (0.00 – 44.77)	0.00 (0.00 – 9.42)	Unavailable
Oncology total CLABSI	2	568	0	0.00 (0.00 – 8.33)	0.16 (0.03 – 0.49)	Unavailable

Rate per 1,000 central line days

Outpatient IV Therapy CLABSI

	No. of contributing hospitals	No. of line days	No. of CLABSI	Aggregate rate (95% CI)	Cumulative aggregate (95% CI)	Comparator rate
OPIV peripherally inserted CLABSI	1	1,060	1	0.94 (0.00 – 6.01)	0.05 (0.00 – 0.31)	Unavailable
OPIV centrally inserted CLABSI	1	0	0	0.00 (0.00 – 0.00)	0.00 (0.00 – 0.00)	Unavailable

Rate per 1,000 central line days

Comment

Of the 5 CLABSI reported from specialised units this quarter, 4 were identified from haematology patients. The haematology CLABSI rate increased this quarter, with 1.15 infections per 1,000 central line days reported, compared to 0.32 infections per 1,000 central line days in Qtr 1 201. The one OPIV event is the first time a CLABSI has been reported from the unit since data collection commenced.

Central Line Associated Bloodstream Infection (CLABSI)

Adult ICU CLABSI

	No. of contributing hospitals	No. of line days	No. of infections this Qtr	Aggregate rate (95% CI)	Cumulative aggregate (95% CI)	Comparator rate [6]
ICU peripherally inserted CLABSI	8	300	0	0.00 (0.00 – 15.67)	0.85 (0.04 – 3.36)	0.64
ICU centrally inserted CLABSI	8	3,764	3	0.80 (0.16 – 2.49)	1.38 (1.11 – 1.73)	1.90
ICU total CLABSI	8	4,064	3	0.74 (0.15 – 2.31)	1.36 (1.10 – 1.70)	1.82

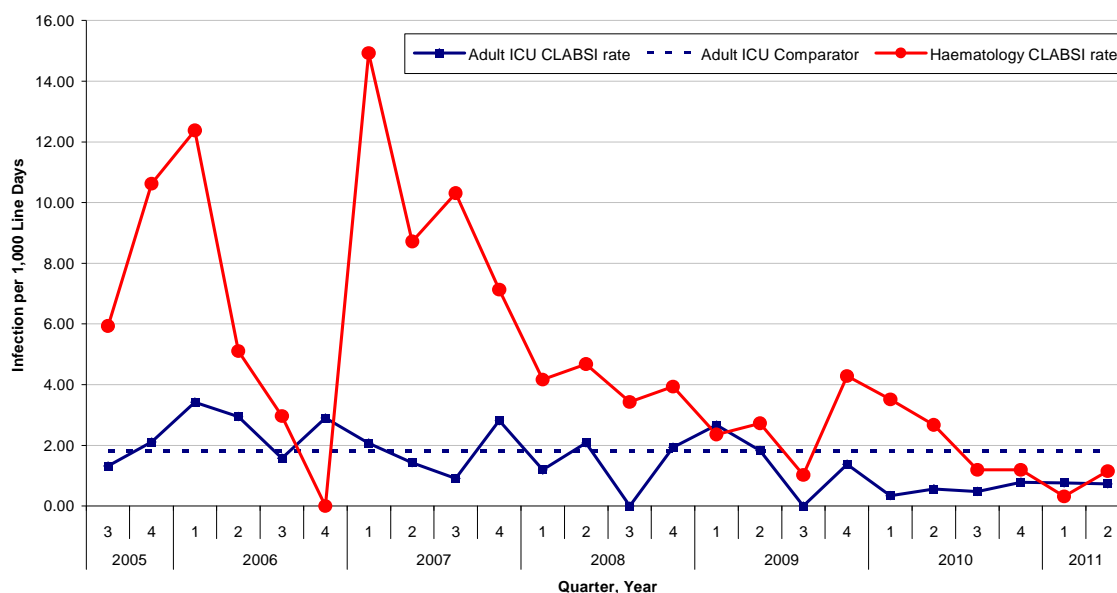
Rate per 1,000 central line days

[6] ACHS 2006 - 2009

Adult ICU central line utilisation ratio (CLUR)

	No. of contributing hospitals	No. of line days	No. of bed days	Tertiary Aggregate CLUR (%)	Total Aggregate CLUR (%)
Adult ICU peripherally inserted CLUR	8	300	6,627	6.6%	4.5%
Adult ICU centrally inserted CLUR	8	3,764	6,627	77.9%	56.8%

Adult ICU and Haematology CLABSI Rates



Comment

The aggregate Adult ICU CLABSI rate remained stable this quarter. The rate of 0.74 infections per 1,000 central line days remains below the comparator. The tertiary hospital aggregate CLUR is higher than the total aggregate CLUR for peripherally inserted and centrally inserted central lines.

Healthcare Associated *Staphylococcus aureus* Bloodstream Infection

(HA-SABSI)

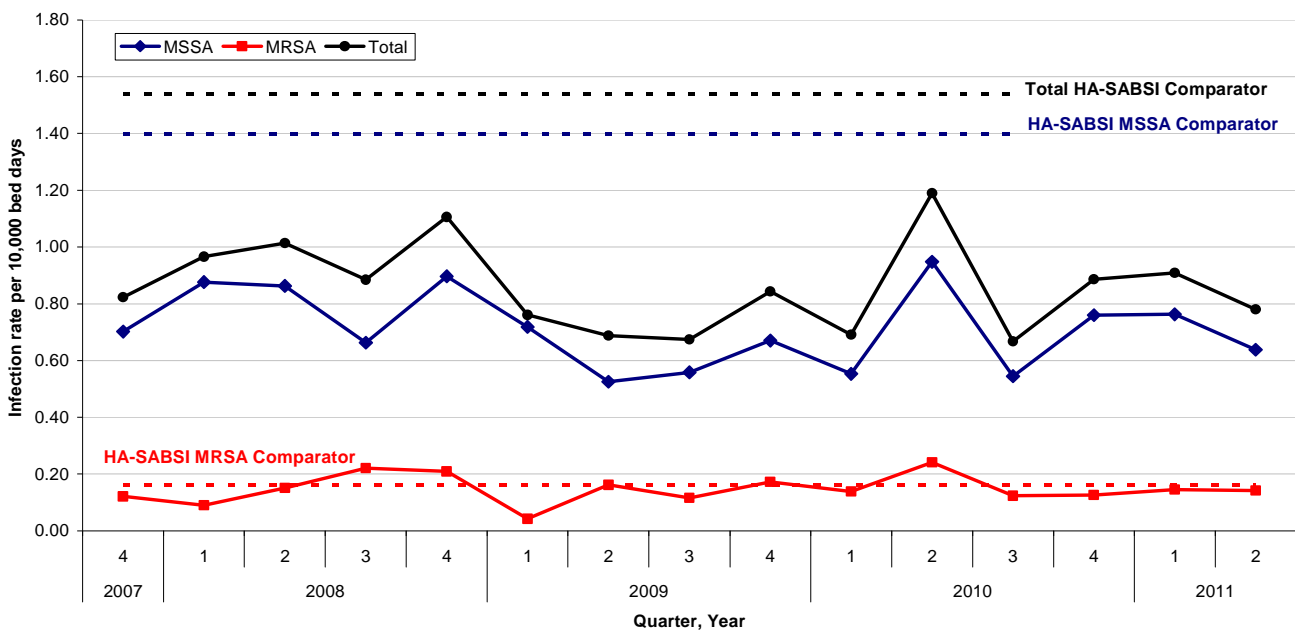
	No. of contributing hospitals	Total No. of bed days	No. of infections	Aggregate rate (95% CI)	Cumulative aggregate (95% CI)	Comparator rate [7]
Total methicillin-sensitive <i>Staphylococcus aureus</i> (MSSA) bloodstream infection	45	564,182	36	0.64 (0.46 – 0.89)	0.71 (0.65 – 0.77)	1.40
Total methicillin-resistant <i>Staphylococcus aureus</i> (MRSA) bloodstream infection	45	564,182	8	0.14 (0.07 – 0.29)	0.15 (0.12 – 0.18)	0.16
Total <i>Staphylococcus aureus</i> bloodstream infection	45	564,182	44	0.78* (0.58 – 1.05)	0.86* (0.79 – 0.93)	1.54[#]

* Rate per 10,000 multi-day and same-day bed-days

[7] TIPCU

Rate per 10,000 patient days

Aggregate MRSA, MSSA and Total HA-SABSI



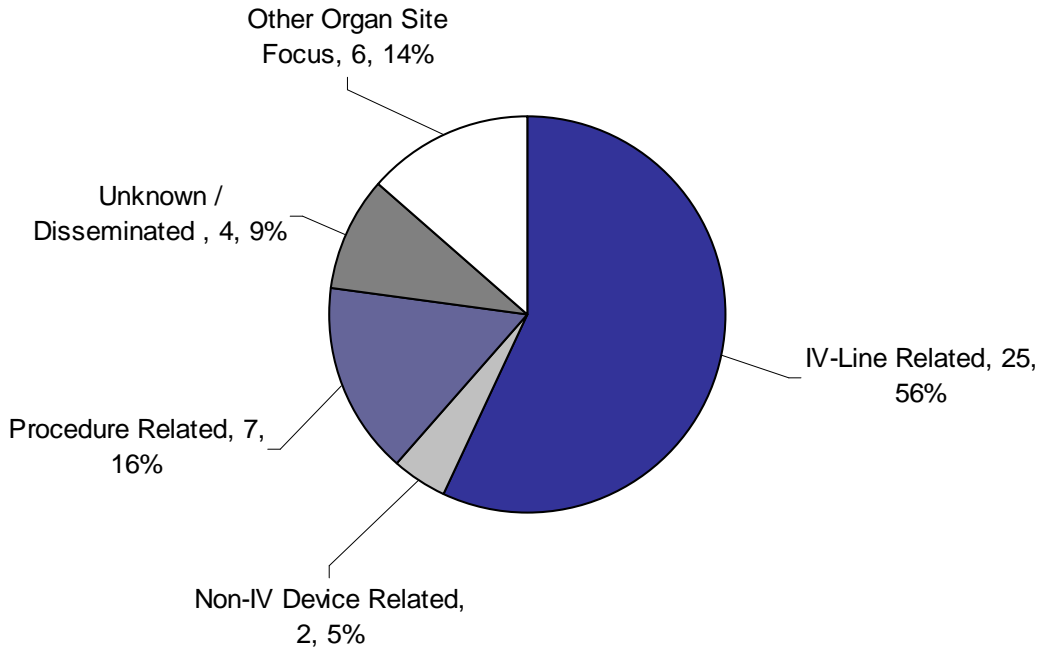
Comment

The total rate of HA-SABSI decreased this quarter, with 0.78 infections per 10,000 bed days reported compared to 0.91 in Qtr 1 2011. The total HA-SABSI and the MSSA HA-SABSI rates remain below the comparator, and the MRSA HA-SABSI rate remains similar to the comparator. The most frequently identified source for HA-SABSI continues to be intravascular devices (56%). The IVD associated HA-SABSI rate this quarter was 0.44 infections per 10,000 bed days, compared to 0.47 infections per 10,000 bed days in Qtr 2 2011.

Healthcare Associated Staphylococcus aureus Bloodstream Infection

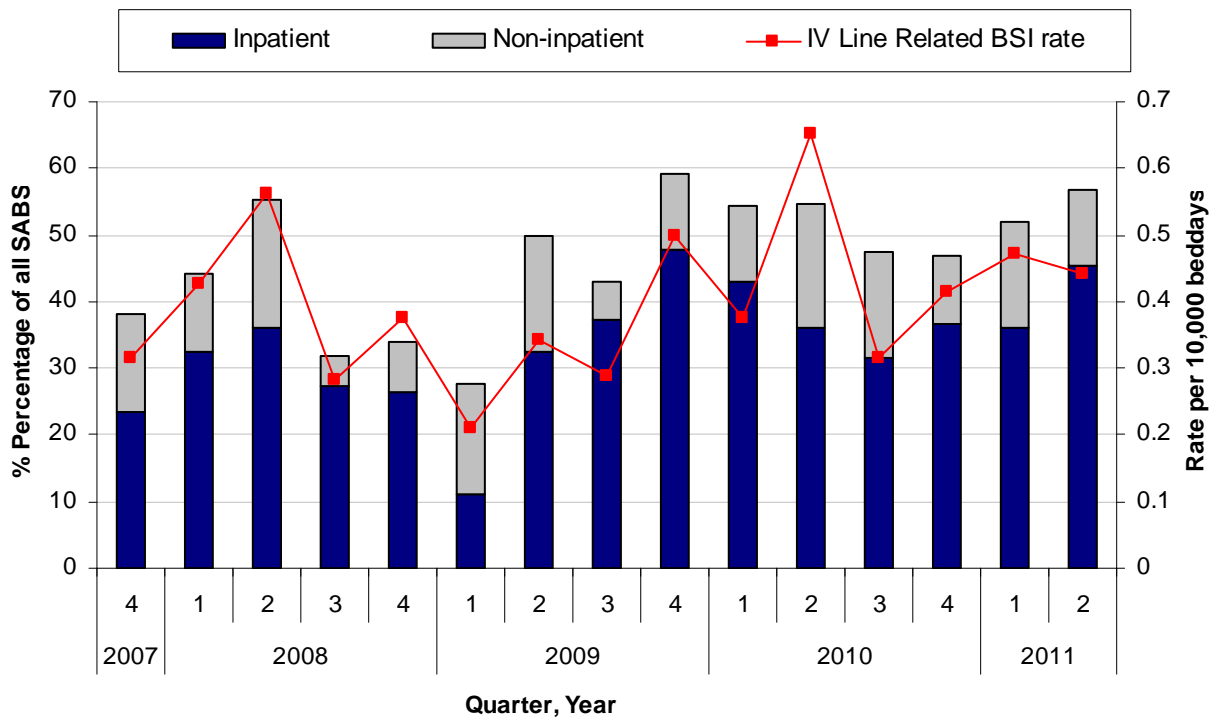
(HA-SABSI)

Source of HA-SABSI Quarter 2, 2011



HA-SABSI attributed to intravascular devices

Intravascular Device Related HA-SABSI



Occupational Exposure

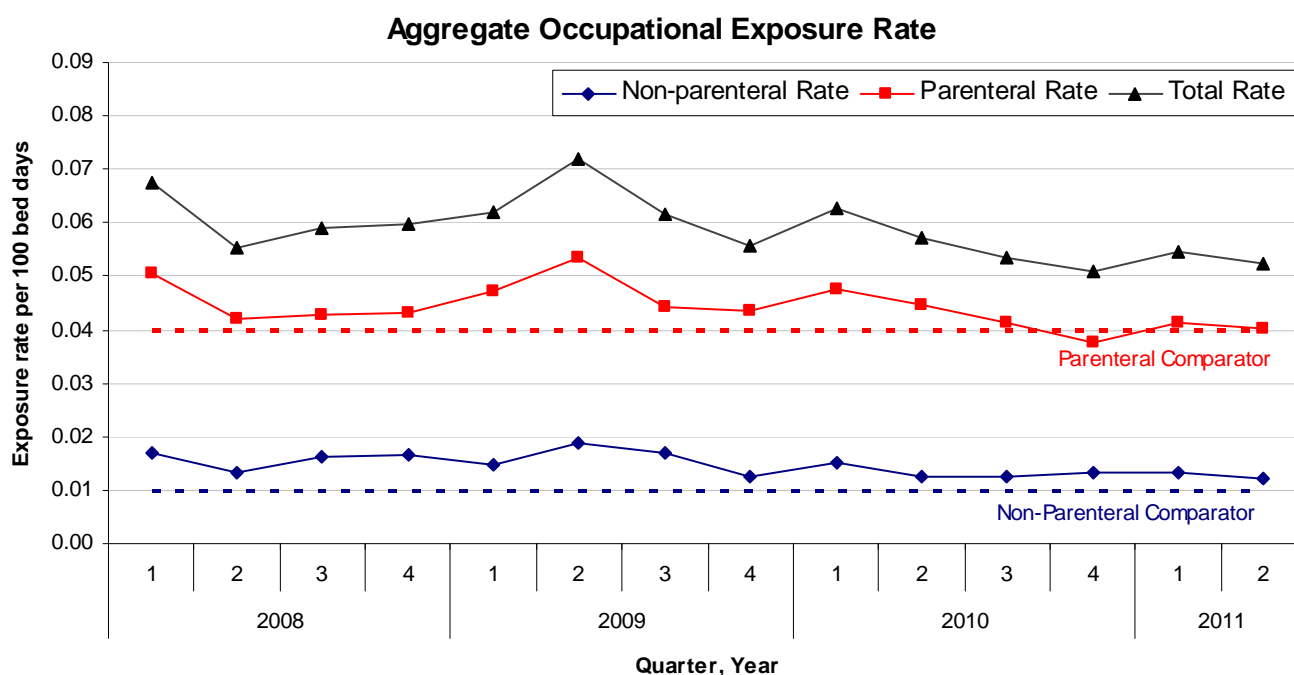
Occupational exposure – parenteral and non-parenteral

Exposure Type	No. of contributing hospitals	No. of Bed days	No. of Exposures this Qtr	Aggregate rate (95% CI)	Cumulative aggregate (95% CI)	Comparator rate [8]
Non-Parenteral	45	624,811	77	0.01 (0.02 – 0.02)	0.01 (0.02 – 0.02)	0.01
Parenteral	45	624,811	251	0.04 (0.04 – 0.05)	0.04 (0.04 – 0.05)	0.04
Total Exposures	45	624,811	328	0.05 (0.05 – 0.06)	0.06 (0.06 – 0.06)	Not Available

Rate per 100 bed-days (multi and same day; includes psychiatric)

[8] ACHS 2005 - 2009

Parenteral and non-parenteral occupational exposure reporting

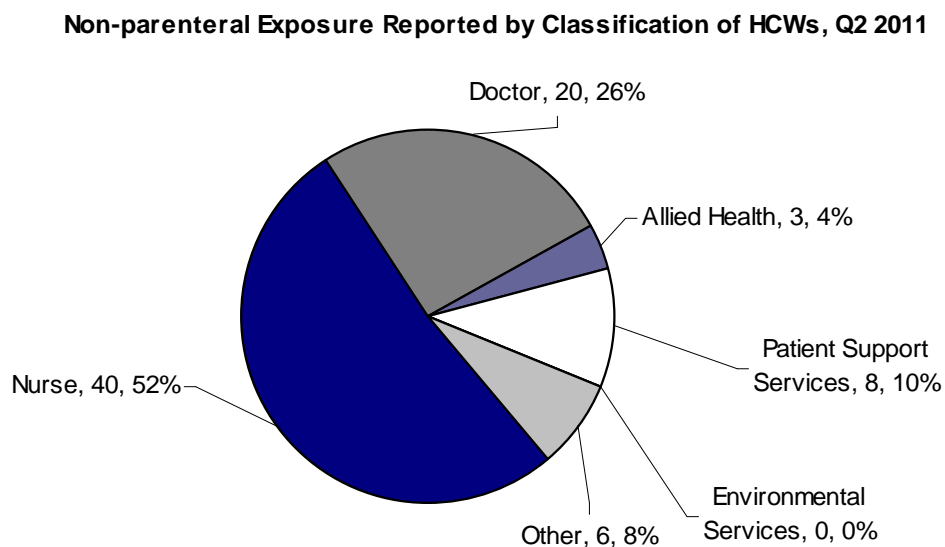


Comment

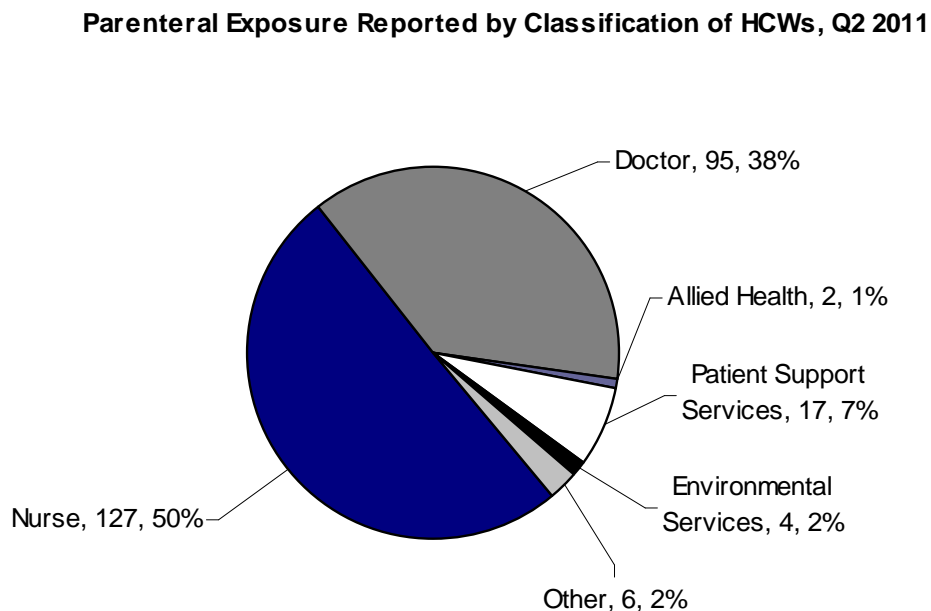
The combined parenteral and non-parenteral occupational exposure rates remained relatively stable at 0.053 exposures per 100 bed days this quarter. Both the parenteral and non-parenteral rates remain slightly above the comparator. The majority of parenteral (50%) and non-parenteral (52%) of occupational exposures continue to be reported by nurses.

Occupational Exposure

Classification of HCW reporting a non-parenteral occupational exposure

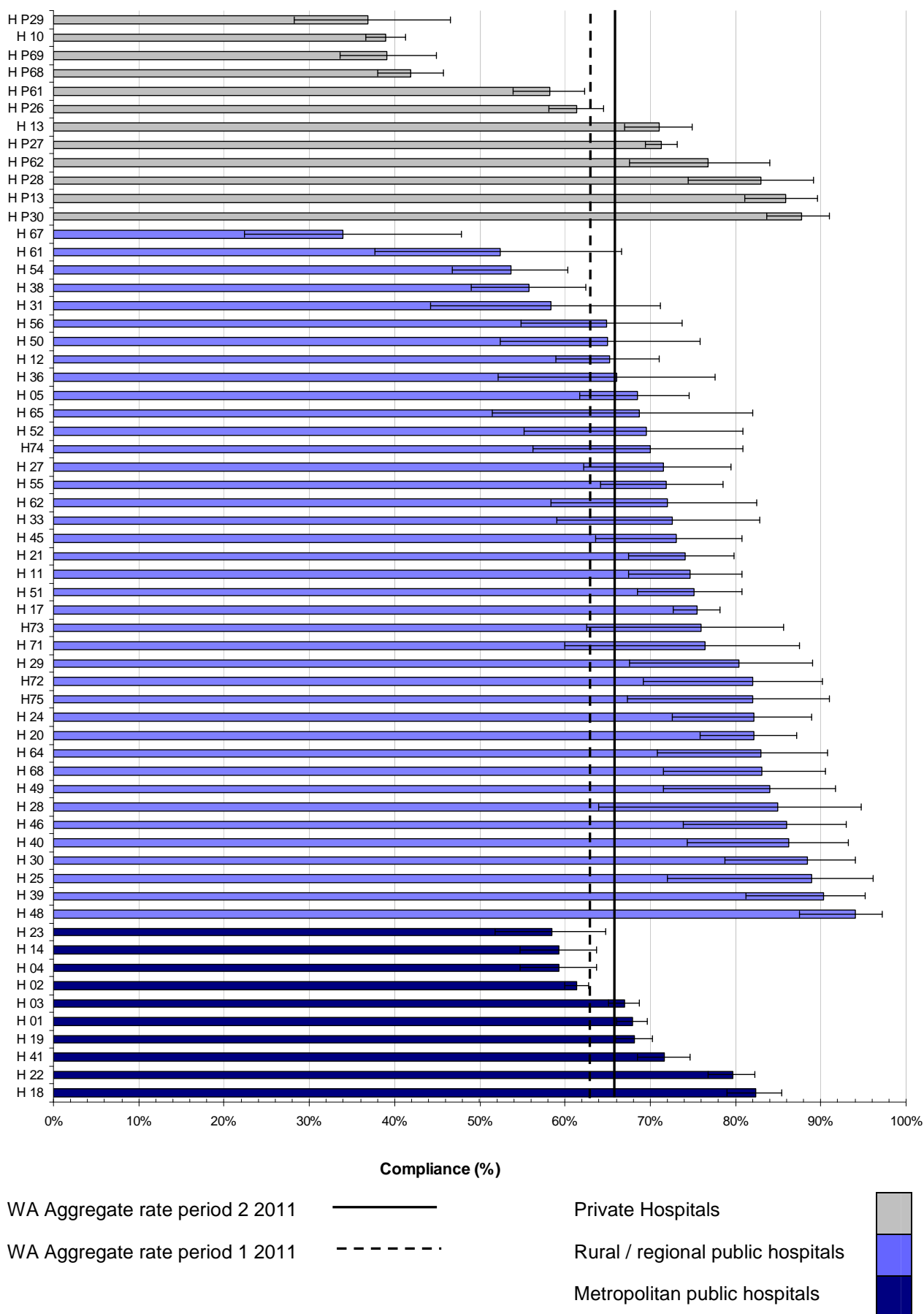


Classification of HCW reporting a parenteral occupational exposure



National Hand Hygiene Initiative (NHHI)

Figure 1 - Hand hygiene compliance WA contributors Audit period 2 2011 – (May – June)



National Hand Hygiene Initiative (NHHI)

Aggregate hand hygiene compliance by hospital data – Table 1

Hospital type	Number of contributing hospitals	Number of moments observed	Aggregate compliance period 2 2011 (%) [95% CI]	Aggregate compliance period 1 2011 (%) [95% CI]
Metropolitan Tertiary	5	12,687	65.5 [64.7 - 66.4]	66.3 [65.4 - 67.3]
Metropolitan Non Tertiary	5	2,878	73.5 [71.9 - 75.1]	68.6 [67.1 - 70.1]
WACHS Regional Resource Centre	6	1,966	69.2 [67.1 - 71.2]	70.2 [67.6 - 72.7]
WACHS Integrated District Hospital	11	1,219	76.7 [74.2 - 79]	73.2 [70.7 - 75.6]
WACHS Small Hospital	22	1,117	74.8 [72.4 - 77.3]	77 [73.5 - 80.1]
WA Public Hospitals	49	19,867	68.3 [67.6 - 68.9]	68.1 [67.3 - 68.1]
WA Private Hospitals	12	7,549	59.4 [58.3 - 60.5]	52.2 [51.0 - 53.3]
All WA contributors	61	27,416	65.8%	63.2%

Comment

The WA aggregate hand hygiene compliance rate for audit period 2 2011 was 65.8%, a statistically significant ($p < 0.05$) increase from audit period 1 (63.2%). Improvements in hand hygiene compliance at WA private hospitals (59.4% P2 vs. 52.2% P1, $p < 0.05$) accounted for this change with only a slight increase in compliance demonstrated in WA public hospitals (68.3% P2, 68.1% P1) (Table 1).

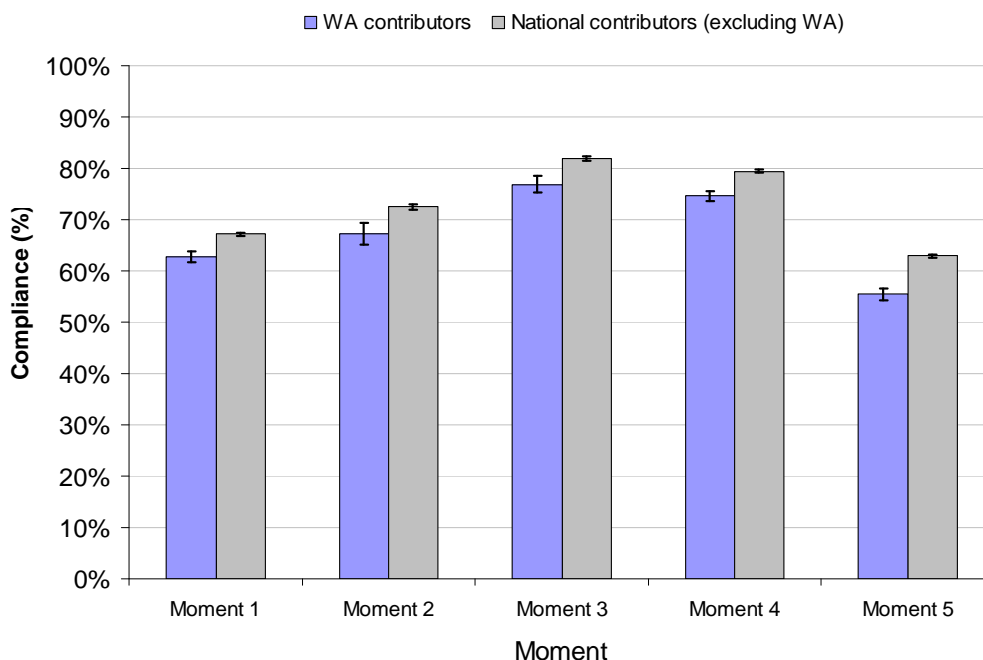
Compliance by moment identifies when healthcare workers (HCWs) perform hand hygiene. Consistent with previous audit periods, WA HCWs were observed to perform hand hygiene more frequently after touching a patient (74.6%) or after a procedure / body fluid exposure risk (76.9%) than before touching a patient (62.8%) or before performing a procedure (67.2%) (Figure 2).

WA HCW hand hygiene compliance, grouped by profession / role, identifies several statistically significant ($p < 0.05$) variations in performance (Figure 3). Of the major HCW professions Nursing / Midwifery HCWs performed appropriate hand hygiene more often than their Allied Health or Medical colleagues. A comparison of WA data with national rates shows similar trends by moment and by major HCW (Figures 2 and 3).

National Hand Hygiene Initiative (NHHI)

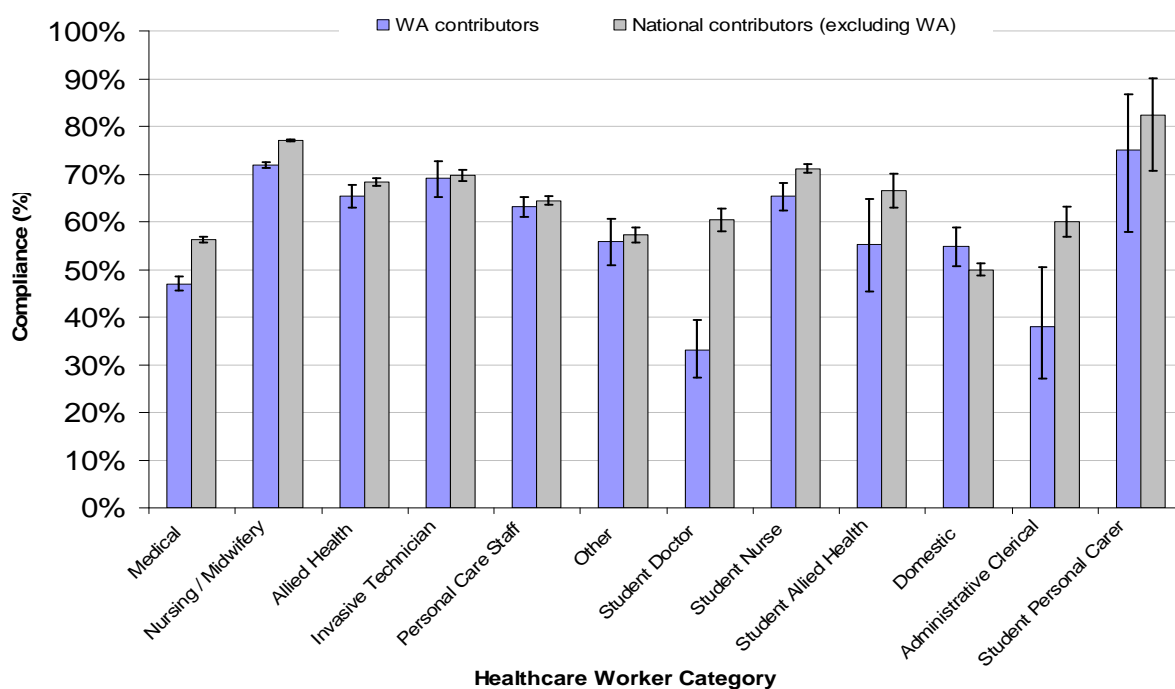
Comparison of WA data to national data, audit period 2 2011

Figure 2 - Hand hygiene compliance by moment - Audit period 2 2011 (May - June)



Moment Category: 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’ Immediate Surroundings

Figure 3 - Hand hygiene compliance by healthcare worker - Audit period 2 2011 (May -June)



HCW category: Medical= Intern / Registrar / Consultant / etc; Nursing / Midwifery = a person registered with the Nurses and Midwives Board of Australia; Allied Health = Physiotherapist / Occupational Therapist / etc; Invasive Technician = phlebotomist / dialysis technician / catheter lab technician / etc; Personal care staff = patient care assistant / orderly / nursing assistant / assistant in nursing; Other = clergy, maintenance employees; Domestic = housekeeping / cleaning / food handling staff.

Notes for Interpretation

Surgical Site Infection

- Risk stratification is based on the risk index developed in the USA by the CDC-NHSN
- International comparator (NHSN) used to compare rate per 100 procedures for hip and knee arthroplasty.
- In Qtr 1 2010, HISWA adopted the revised comparator rate from the NHSN [1] i.e. revised hip rate of 1.27 per 100 procedures (prev. 1.51) and revised knee rate of 0.89 per 100 procedures (prev. 1.22).
- ACHS data is used as a comparator for Caesarean sections.

MRSA

- HISWA contributors use the same numerator and denominator MRSA definitions as the SA surveillance unit. These are consistent with the recently drafted national minimum dataset for multi-resistant organism (MRO) surveillance.
- This area of reporting is undergoing significant evolution nationally and comparison should be possible with other jurisdictions in Australia in the future.

Clostridium difficile

- Data collection in accordance with the Australian national definition commenced January 2010.
- The purpose of this national indicator is to describe the burden of disease and includes both community and healthcare associated infections. Hospitals are encouraged to collect enhanced surveillance data to establish the rate of healthcare-associated CDI and severe within their facilities.

Haemodialysis BSI

- An international comparator with a large sample size has been chosen for haemodialysis BSI until this indicator is further developed within other Australian jurisdictions.
- Commencing July 2009 this indicator became part of the mandatory indicator program. The increased data set will enhance the value of the HISWA data.
- The rate per 100 pt-months can be interpreted as: the average % of dialysis patients acquiring an access associated BSI per month.

Central line associated BSI - Haematology and Oncology and Outpatient IV Therapy

- ACHS current surveillance requirements for Haematology and Oncology Units are for inpatient episodes only, however as patients are often discharged home with long-term catheters in-situ and infections frequently occur outside hospital, HISWA has combined inpatient and outpatient data. ACHS plans to review and recommend this in the future and therefore data will become available from other jurisdictions.
- Currently in WA there are two hospitals reporting Haematology BSI and only one reporting Oncology and Outpatient IV Therapy indicators to HISWA.

Healthcare Associated *Staphylococcus aureus* Bloodstream Infection (HA-SABSI)

- Submission of HA-SABSI data became mandatory in October 2007
- Rate of HA-SABSI included as indicator in National Healthcare Agreements from 2009
- Rate of HA-SABSI utilised as outcome measure for NHHI

Central line associated BSI – Adult ICU

- This indicator was included in the mandatory indicator program in October 2009 for hospitals with an Adult ICU.

Occupational Exposure

- This indicator commenced in January 2008 as part of the mandatory reporting program.
- Participation in this indicator includes mental health facilities in WA.

Hand Hygiene Compliance

- WA Hospitals participating in the NHHI follow the auditing methodology outlined in the Hand Hygiene Australia '5 Moments for Hand Hygiene' Manual (accessible at <http://www.hha.org.au>).
- In audit period 2, 2010 HCW categories domestic and administrative / clerical were adopted to more accurately categorise health care roles previously grouped under the PSA/PCA/AIN/NA category.

Comparator references

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