Impact of Hand Hygiene improvement on health care-associated infection

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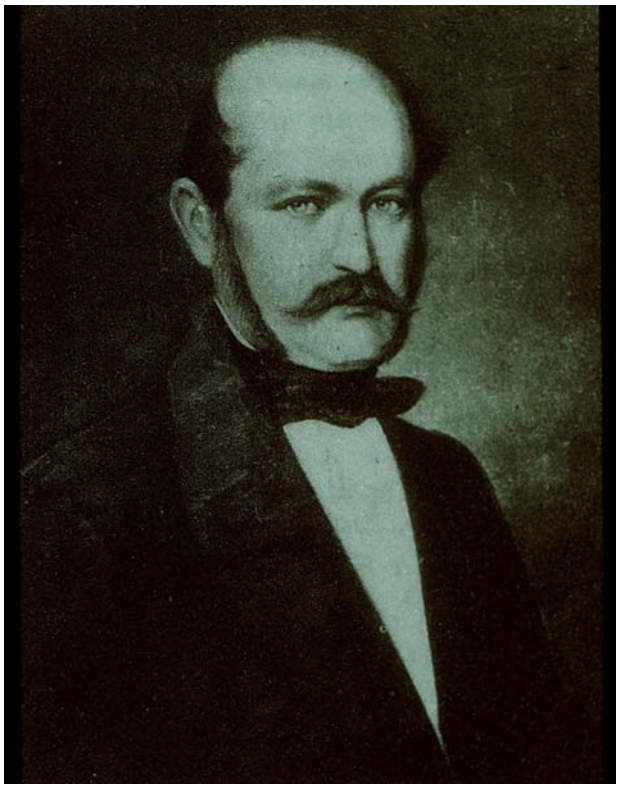
Overview



- Background
- Outcome measures
  - 5 HH compliance
  - SAB rates
- Australian – nationwide program
- Future issues

Impact of hand hygiene promotion

- In the last 30 years, > 20 studies demonstrated the effectiveness of hand hygiene to reduce HAIs.

Impact of hand hygiene promotion

Year	Hospital setting	Increase of hand hygiene compliance	Reduction of HCAI rates	Follow-up	Reference
1989	Adult ICU	From 14% to 73% (before pt contact)	HCAI rates: from 33% to 10%	6 years	Conly et al
2000	Hospital-wide	From 48% to 66%	HCAI prevalence: from 16.9% to 9.5%	8 years	Pittet et al
2004	NICU	From 43% to 80%	HCAI incidence: from 15.1 to 10.7/1000 patient-days	2 years	Won et al
2005	Adult ICUs	From 23.1% to 64.5%	HCAI incidence: from 47.5 to 27.9/1000 patient-days	21 months	Rosenthal et al
2005	Hospital-wide	From 62% to 81%	Significant reduction in rotavirus infections	4 years	Zerr et al
2007	Neonatal unit	From 42% to 55%	HCAI incidence: overall from 11 to 8.2 infections/1000 patient-days) and in very low birth weight neonates from 15.5 to 8.8 infections /1000 patient-days	27 months	Pessoa-Silva et al
2007	Neurosurgery	NA	SSI rates: from 8.3% to 3.8%	2 years	Thu et al
2008	1) 6 pilot health-care facilities 2) all public health-care facilities in Victoria (Aus)	1) from 21% to 48% 2) from 20% to 53%	MRSA bacteraemia: 1) from 0.05 to 0.02/100 patient-discharges per month; 2) from 0.03 to 0.01/100 patient-discharges per month	1) 2 years 2) 1 year	Grayson et al
2008	NICU	NA	HCAI incidence: from 4.1 to 1.2/1000 patient-days	18 months	Capretti et al

Allegranzi B and Pittet D. The role of hand hygiene in healthcare-associated infections prevention. J Hosp Infect 2009

Effectiveness of a hospital-wide programme to improve compliance with hand hygiene

Didier Pittet, Stéphane Hugonnet, Stephan Harbarth, Philippe Mourouga, Valérie Sauvan, Sylvie Touveneau, Thomas V Perneger, and members of the Infection Control Programme

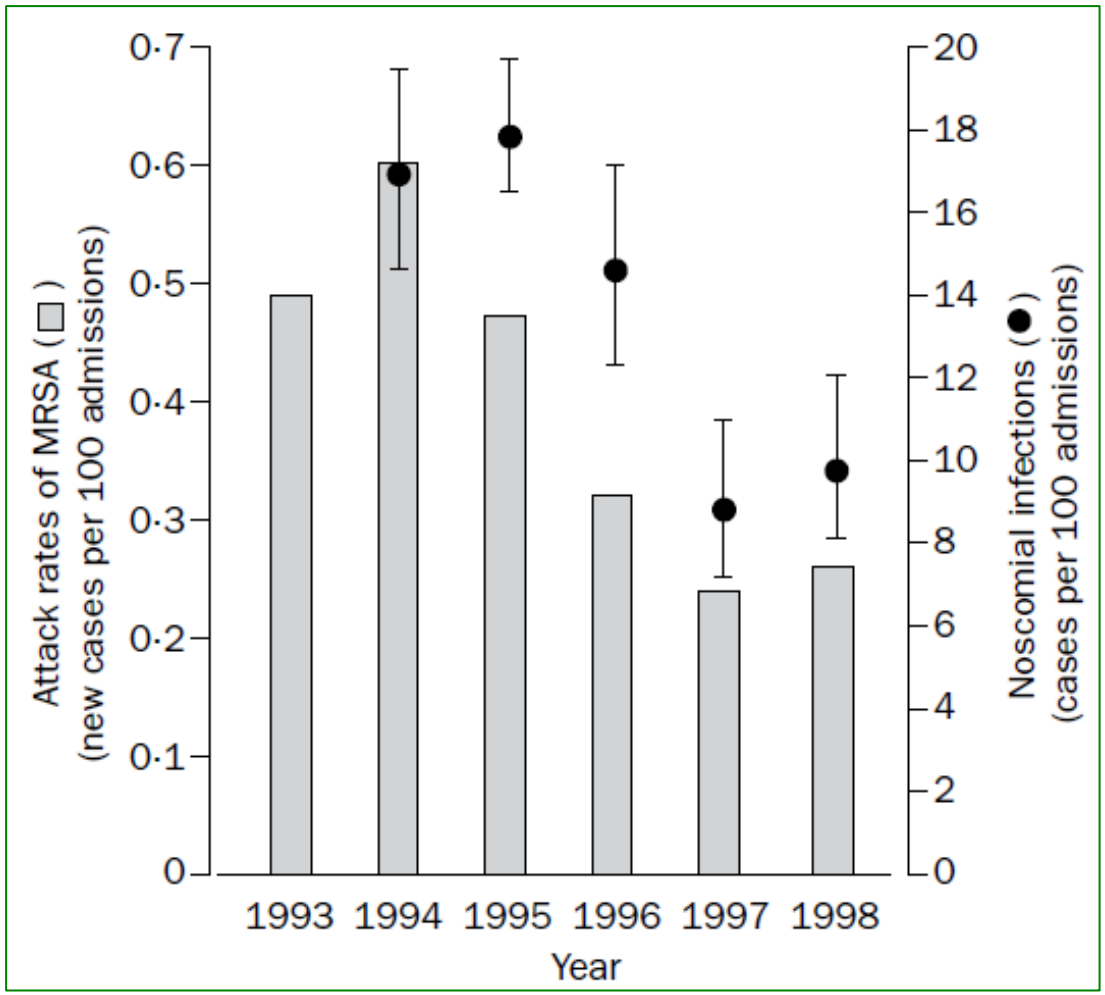
THE LANCET • Vol 356 • October 14, 2000

Intervention:

- System change (use of alcohol-based handrubs)
- Education of healthcare workers
- Monitoring and feedback of performance (compliance)
- Reminders in the work place (posters)
- Administrative support
- Leadership and culture change

"Talking walls"

Reduction of annual attack rate of MRSA



Overall incidence of MRSA infections decreased from 2.16 to 0.93 episodes per 10,000 patient-days

Pittet et al, Lancet 2000

Reduction in Surgical Site Infections in Neurosurgical Patients Associated With a Bedside Hand Hygiene Program in Vietnam

Le Thi Anh Thu, MD, PhD; Michael J. Dibley, MBBS, MPH; Vo Van Nho, MD, PhD; Lennox Archibald, MBBS, MD, FRCP, DTM&H; William R. Jarvis, MD; Annette H. Sohn, MD

TABLE 2. Comparison of Incidence Rate Ratio (IRR) of Surgical Site Infection Among Neurosurgical Patients Between the Wards A and B After the Hand Hygiene Intervention in Ward A, Cho Ray Hospital, Vietnam, July 11 to August 15, 2000, and July 14 to August 18, 2001

	Ward A (1,789 patient-days)		Ward B (3,184 patient-days)			
Variable	No. of patients	No. of cases per 1,000 patient-days	No. of patients	No. of cases per 1,000 patient-days	IRR (95% CI)	Adjusted IRR[a] (95% CI)
SSI						
All	6	3.4	23	7.2	2.2 (0.88-5.29)	3.5 (0.88-13.65)
Superficial[b]	0	0	3	0.9	…	…
Deep	1	0.6	8	2.5	4.5 (0.56-35.9)	4.7 (0.59-37.9)
Organ/space	5	2.8	12	3.8	1.3 (0.48-3.83)	1.6 (0.56-4.55)
Wound classification						
Clean	2	…	11	…	3.3 (0.73-14.76)	3.4 (0.27-42.63)
Contaminated	3	…	8	…	1.4 (0.36-5.16)	3 (0.54-16.99)
Dirty	1	…	4	…	1.2 (0.13-10.71)	0.8 (0.56-4.55)

NOTE. The IRR for ward A was 1. CI, confidence interval.

[a] Adjusted for National Noscomial Infection Surveillance System risk index, prophylaxis, and sex.

[b] IRRs were not calculated because of the value zero for ward A.

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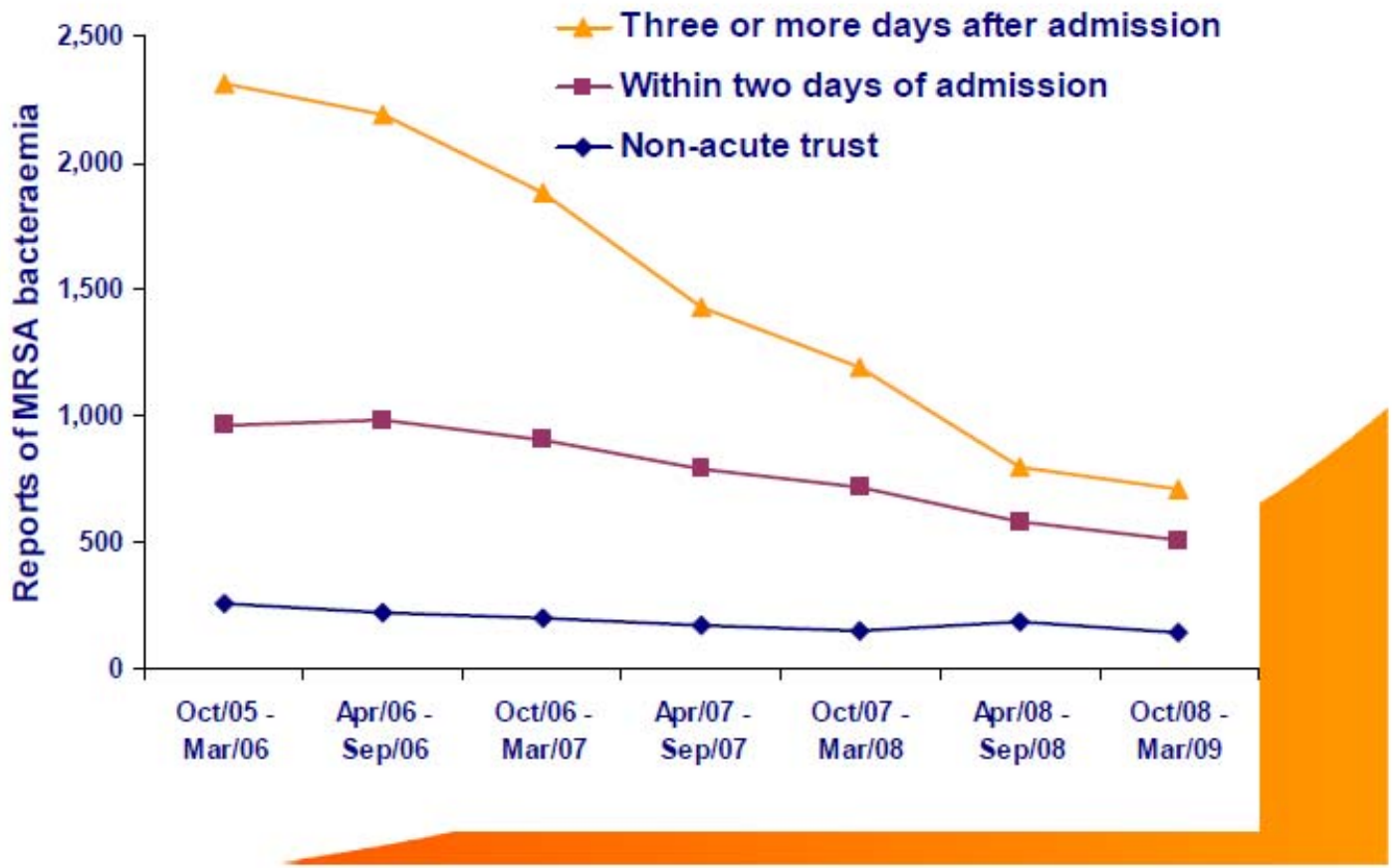
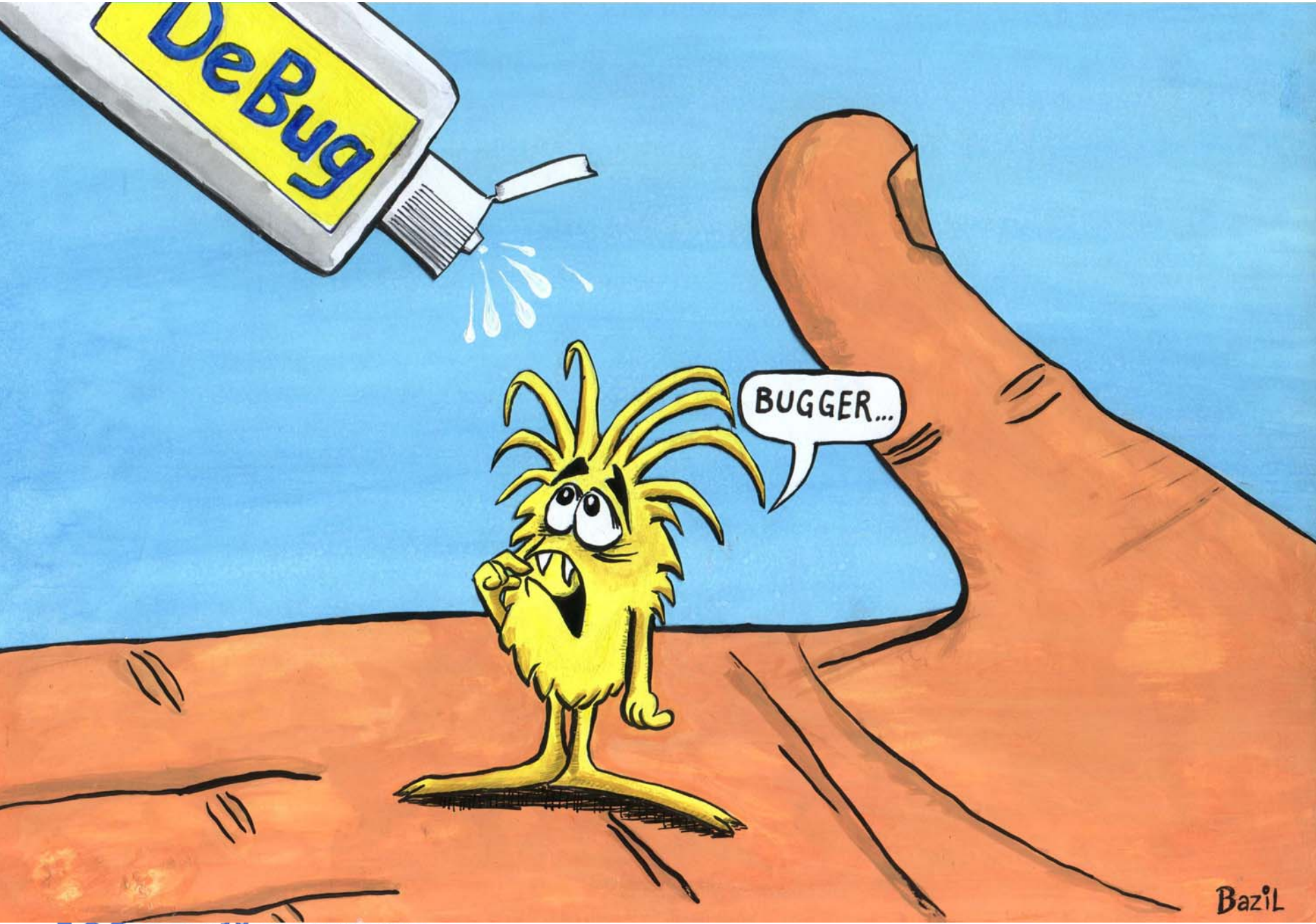
SSI rate reduced by 54% in the intervention ward, more than half of superficial SSIs eliminated

Trends in MRSA from 2005 to March 2009

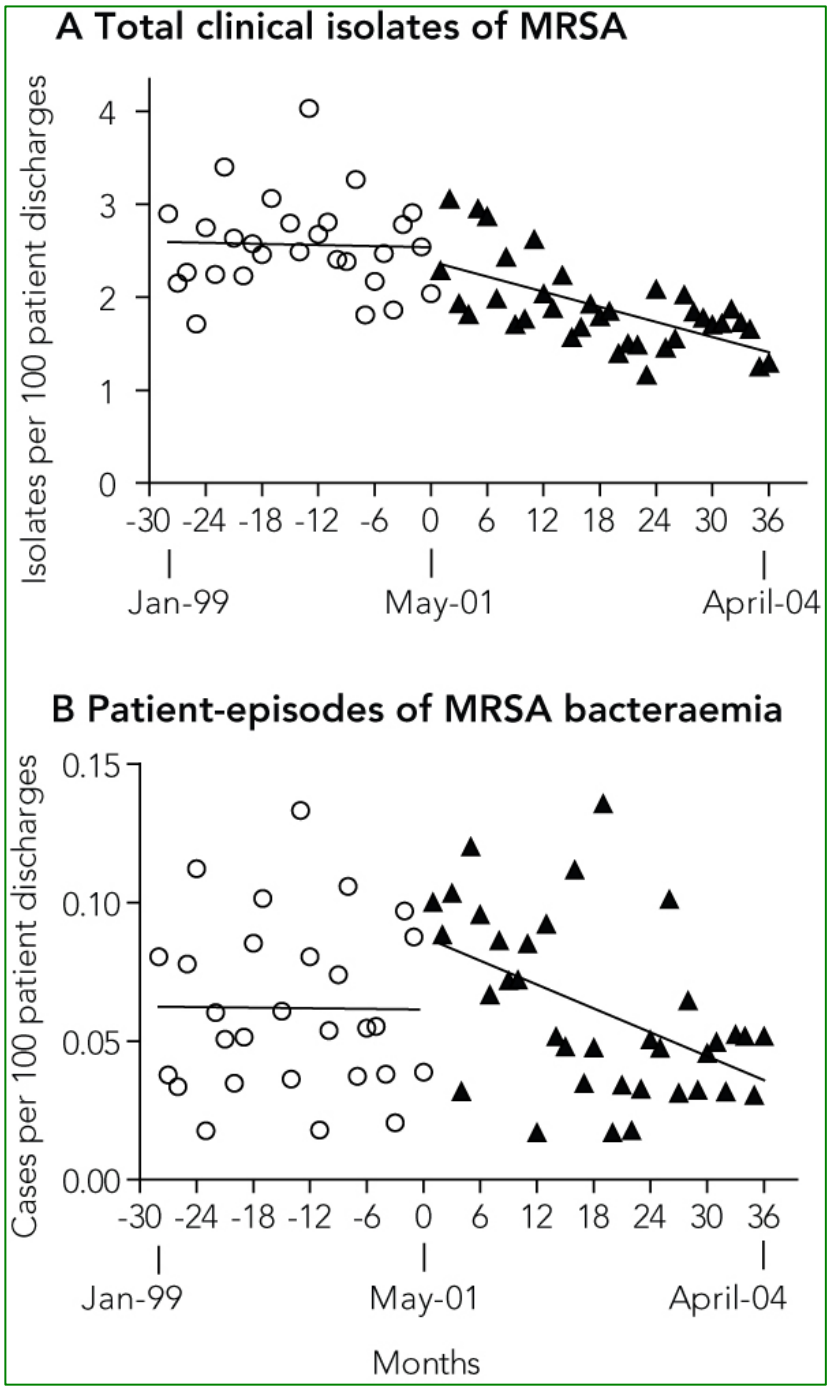



Switchboard
No smoking
YOU... COME IN... BUT THE OTHER GUY LOOKS LIKE TROUBLE!
MEMBERS ONLY


DeBug
BUGGER...
BazilL


Bug


DeBug
DeBug
Start



MRSA isolates and patient-episodes of bacteraemia

After 36 months:

Total MRSA isolates:

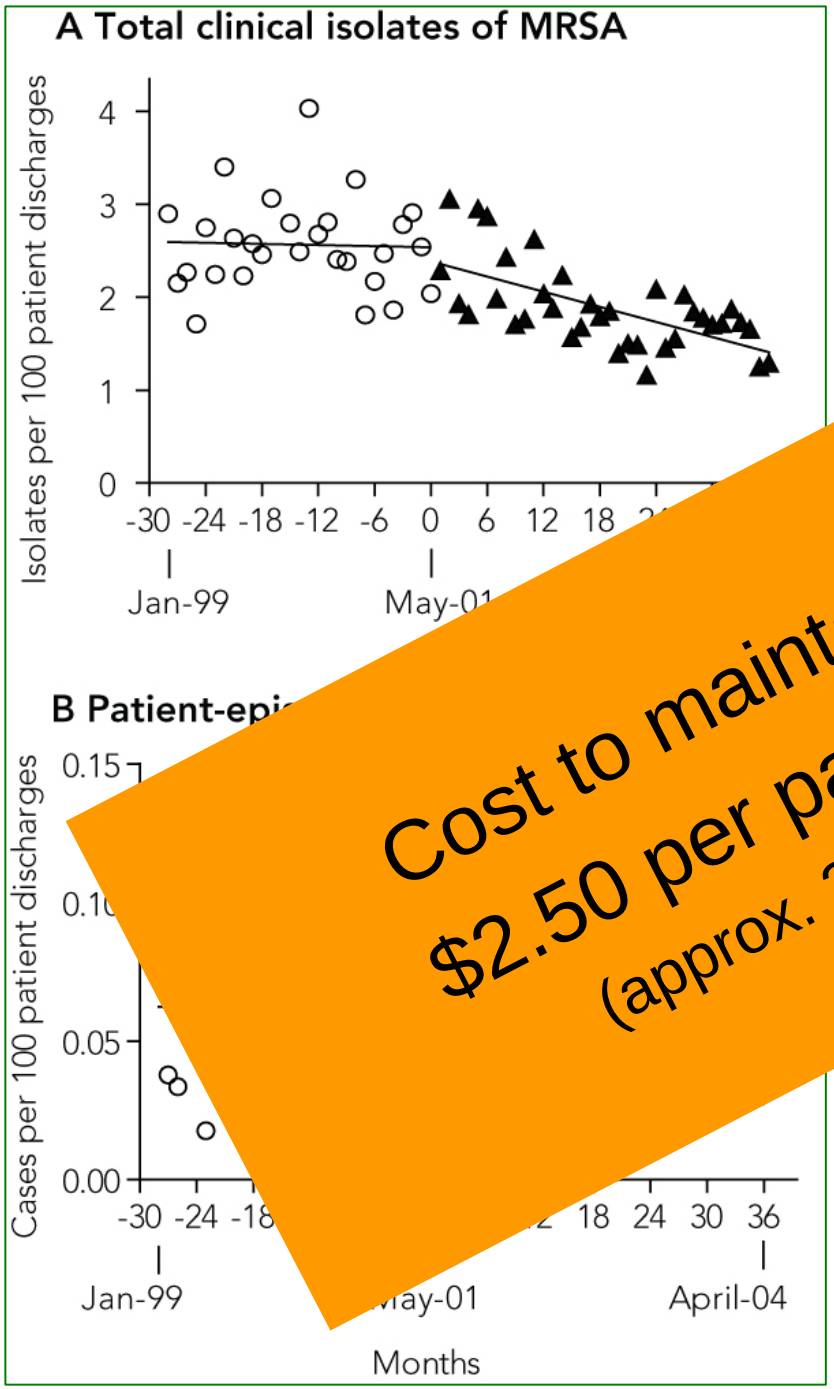
- 40% reduction (95% CI, 23%–58%)
- 1008 fewer clinical isolates

Patients with MRSA bacteraemia:

- 57% reduction in monthly rate (95% CI, 38%–74%)
- 53 fewer bacteraemias than expected (95% CI, 36–68 episodes)

Johnson *et al.* Med J Aust 2005; 183:509-514

MRSA isolates and patient … des of … a



Cost to maintain program = $2.50 per patient admission (approx. 2/3 price of a BigMac)

…3%–58%)

…ical isolates

…ts with MRSA bacteraemia:

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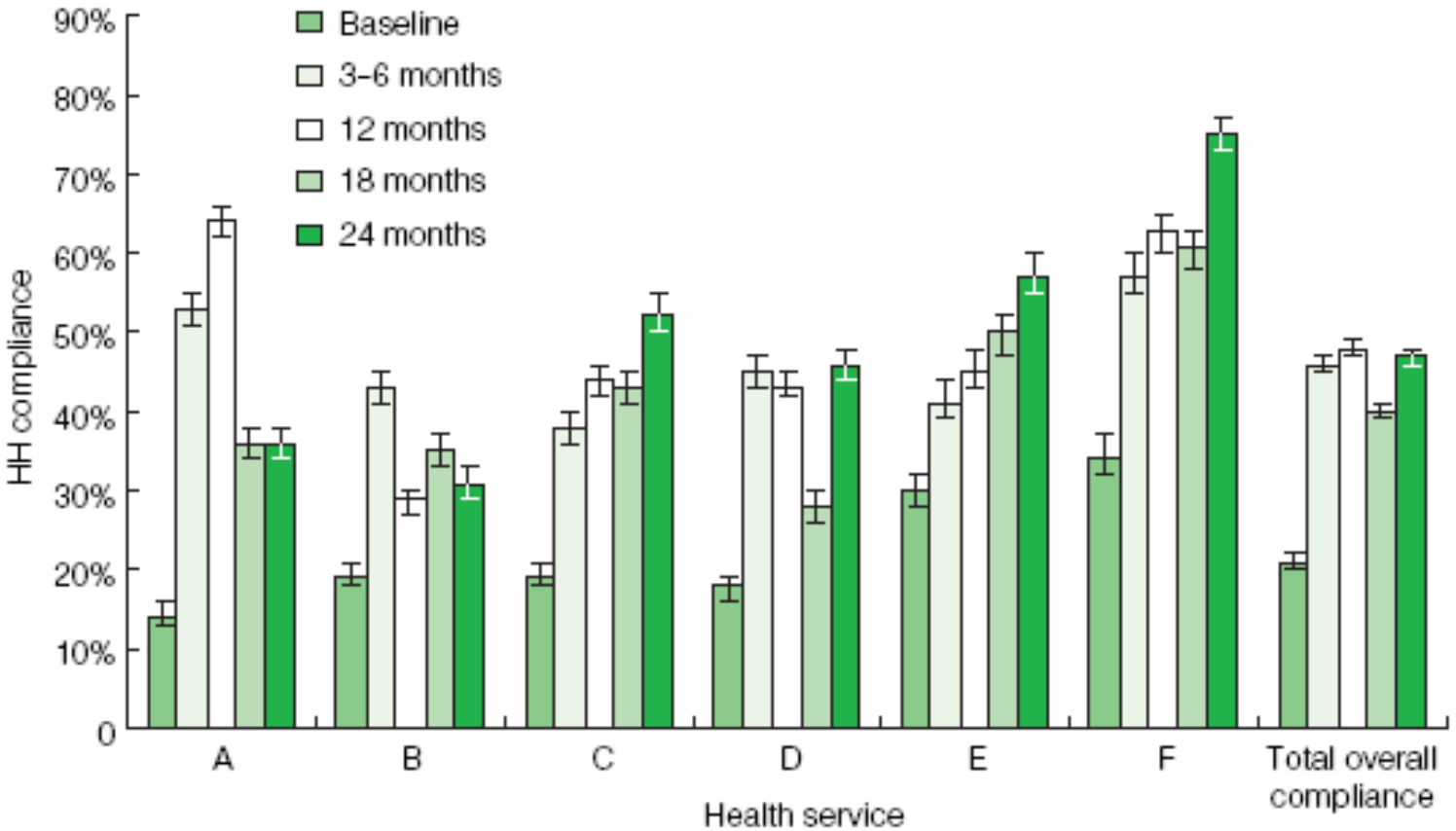
Johnson *et al.* Med J Aust 2005; 183:509-514

Hand Hygiene Compliance

1 Pilot program: hand hygiene (HH) compliance at each of the six pilot program hospitals before and after introduction of the HHCCP*



HHCCP = hand hygiene culture-change program. * Mean HH compliance increased significantly over the 24 months of the pilot study ($P < 0.001$).

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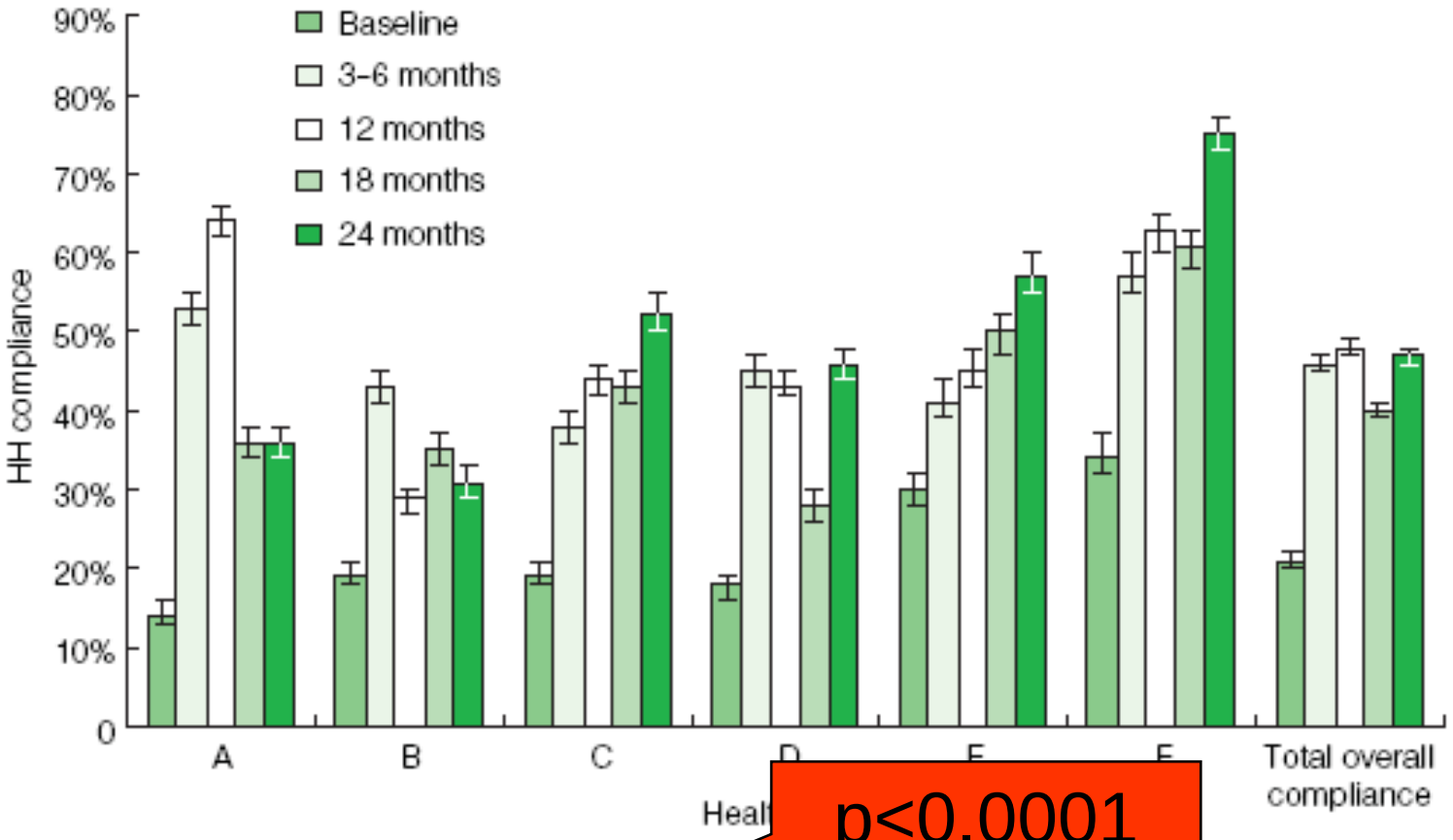
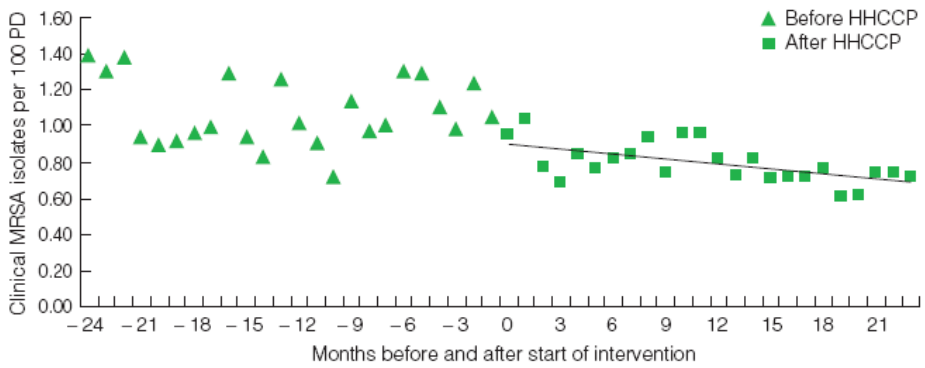


HHCCP = hand hygiene cultur[illegible] progra[illegible]. Mean HH compliance increased significantly over the 24 months of the pilot s[illegible]udy ($P < 0.001$).

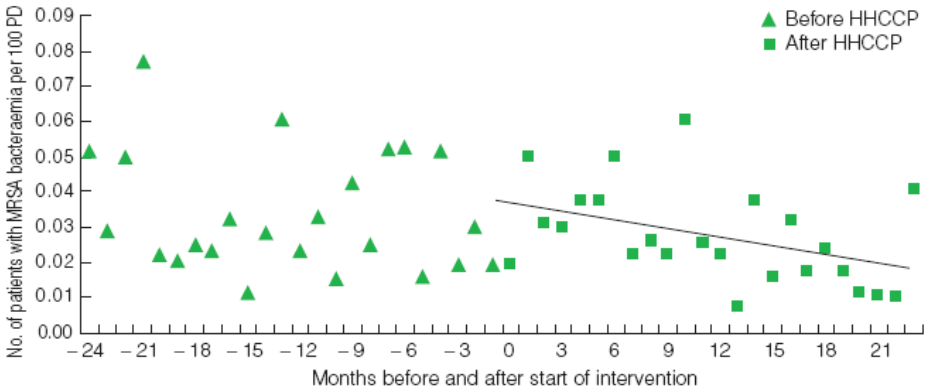
MRSA isolates & bacteraemias

4 Pilot program: number of clinical MRSA isolates per 100 patient discharges (PD) per month before and after introduction of the HHCCP*



HHCCP = hand hygiene culture-change program. MRSA = methicillin-resistant *Staphylococcus aureus*.
* A statistically significant reduction in clinical MRSA isolates was noted at 24 months after the start of the intervention ($P = 0.003$ for trend). ◆

3 Pilot program: number of patients with MRSA bacteraemia per 100 patient discharges (PD) per month before and after introduction of the HHCCP*



HHCCP = hand hygiene culture-change program. MRSA = methicillin-resistant *Staphylococcus aureus*.
* A statistically significant reduction in bacteraemias was noted at 24 months after the start of the intervention ($P = 0.035$ for trend). ◆

MRSA isolates or bacteraemias per month per 100 separations

MRSA isolates & bacteraemias

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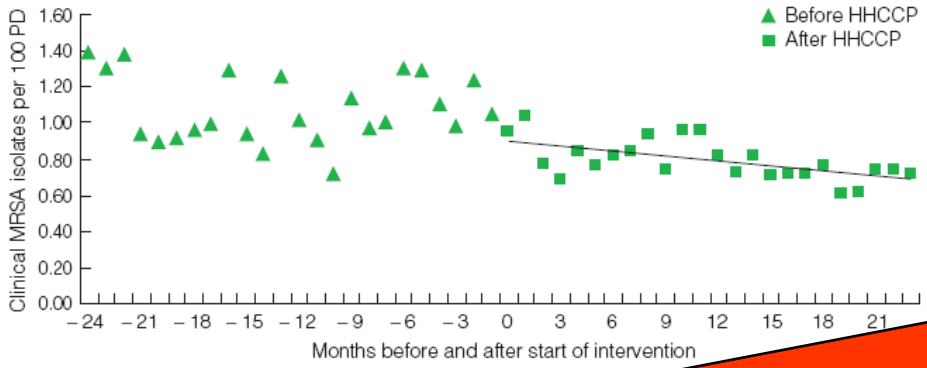

HHCCP = hand hygiene culture-change program. MRSA =
* A statistically significant reduction in clinical M
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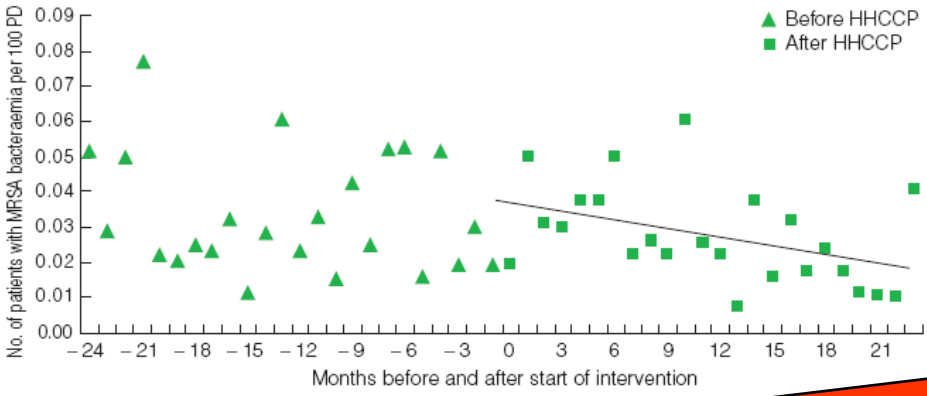
MRSA isolates or bacteraemias per month per 100 separations

716 (95% CI: 269-1162) fewer MRSA clinical isolates in the 6 Pilot hospitals than expected prior to the intervention

3 Pilot program: number of patients with MRSA bacteraemia per 100 patient discharges (PD) per month before and after introduction of the HHCCP*

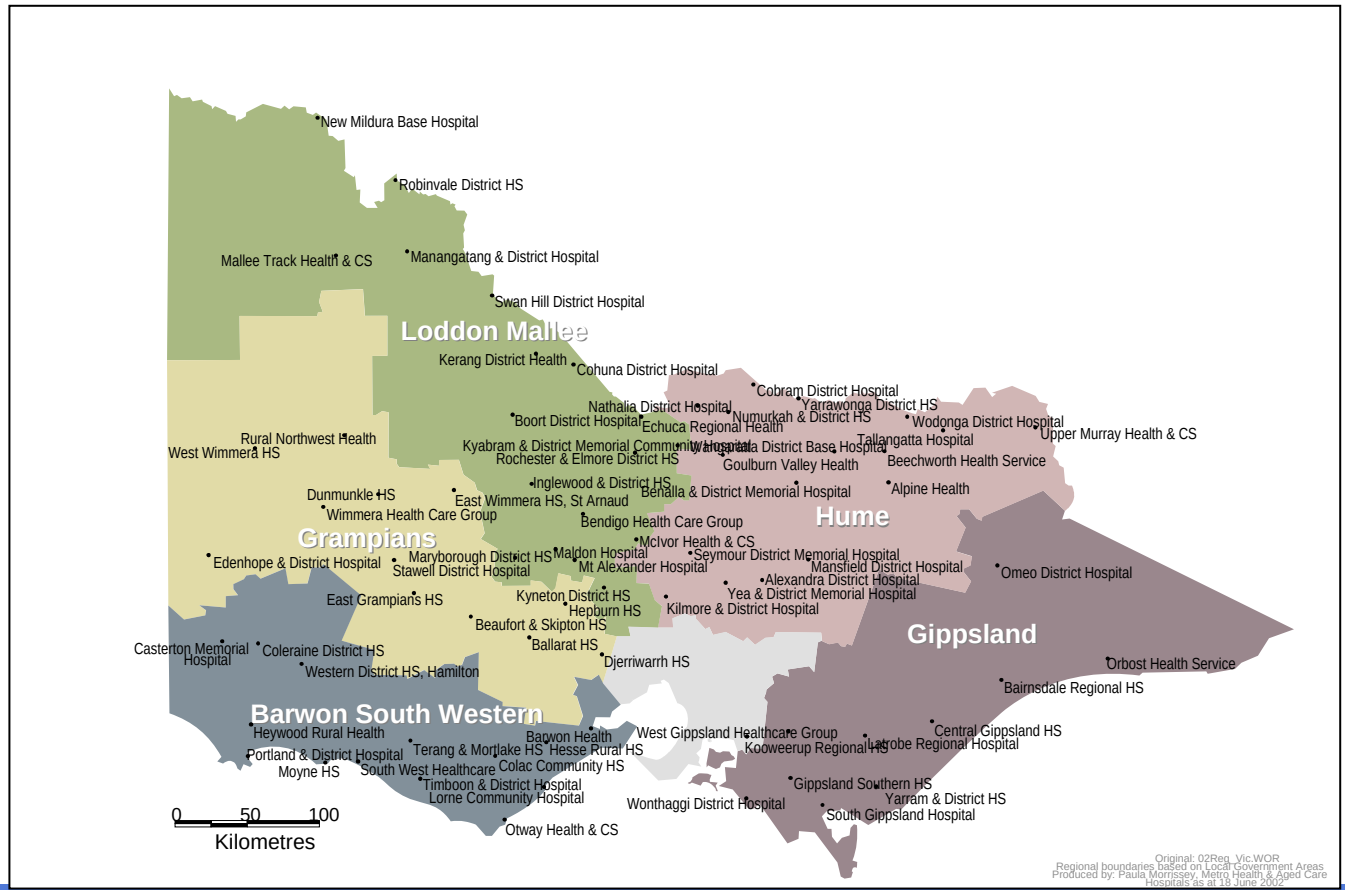


HHCCP = hand hygiene culture-change program. MRSA =
* A statistically significant reduction is
($P = 0.035$ for trend).

65 (95% CI: 5-126) fewer patients with MRSA bacteraemia in the 6 Pilot hospitals than expected prior to the intervention

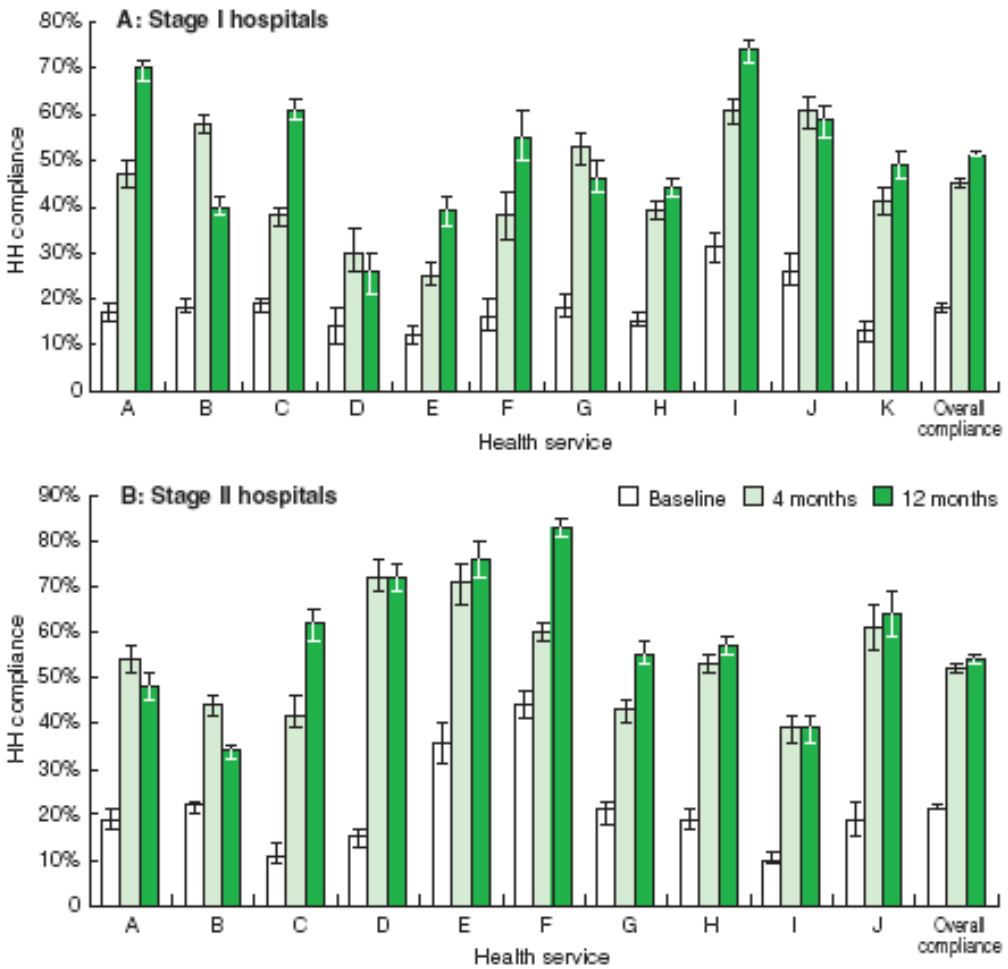
Victorian HH Statewide Roll-out

- Two stages: May 06 - June 07
- All but two Victorian public hospitals participated



Statewide Hand Hygiene Compliance

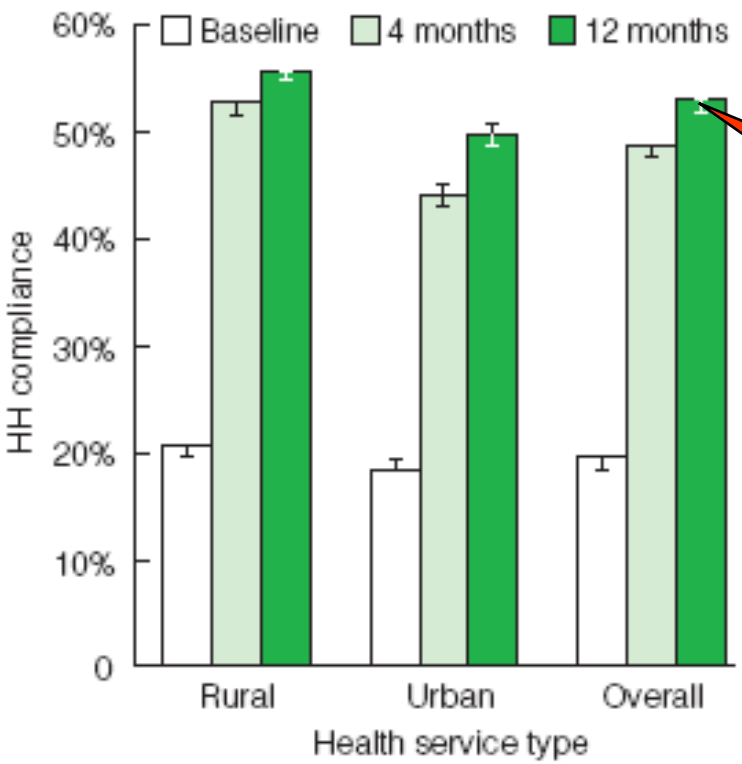
7 Statewide roll-out: hand hygiene (HH) compliance before and after introduction of the HHCCP, by stage of roll-out and individual health service*



HHCCP = hand hygiene culture-change program. * In Stage I hospitals, HH compliance increased from 18% (95% CI, 17%–19%; range, 13%–31%) at baseline to 51% (95% CI, 51%–52%; range, 26%–74%) after 11–12 months. In Stage II hospitals, HH compliance increased from 21% (95% CI, 21%–22%; range, 10%–44%) at baseline to 54% (95% CI, 53%–55%; range, 34%–83%) after 11–12 months. For Both Stage I and Stage II hospitals, increases in overall HH compliance were significant for both baseline to 4 months ($P < 0.001$) and 4 to 12 months ($P < 0.001$). ◆

Statewide Hand Hygiene Compliance

6 Statewide roll-out: hand hygiene (HH) compliance before and after introduction of the HHCCP, by health service type*



HHCCP = hand hygiene culture-change program.
* Overall HH compliance (for all hospitals [Stages I and II]) increased from 20% at baseline to 53% at 11–12 months. Increases in overall HH compliance were significant for both baseline to 4 months ($P < 0.001$) and 4 to 12 months ($P < 0.001$). ◆

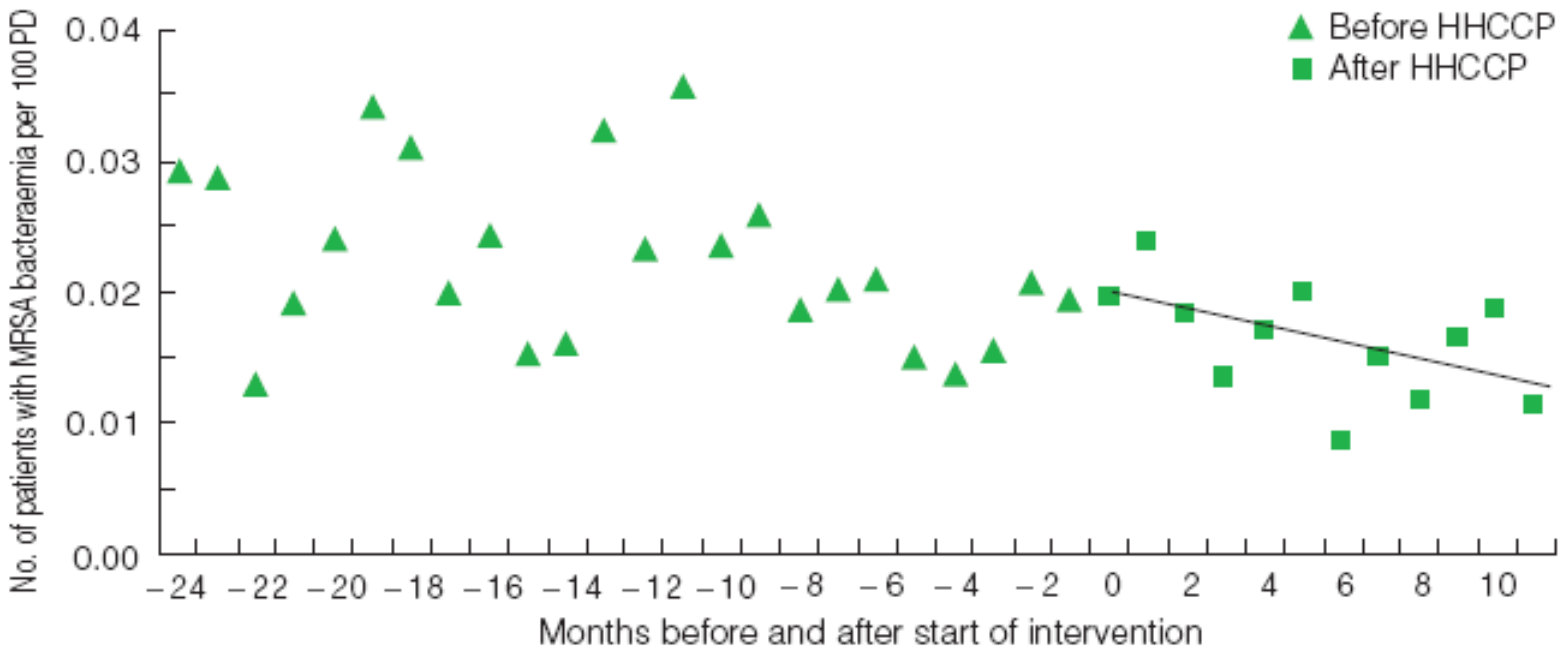
Overall HH Compliance:
Baseline: 20% (95%CI 19-20%)
to
11-12 mths: 53% (95%CI 52-53%)

Increases significant after 4-mths and 12-mths ($p<0.0001$)

Statewide - MRSA bacteraemias

Patients with MRSA bacteraemia per month per 100 separations

8 Statewide roll-out: patients with MRSA bacteraemia per 100 patient discharges (PD) per month before and after introduction of the HHCCP*

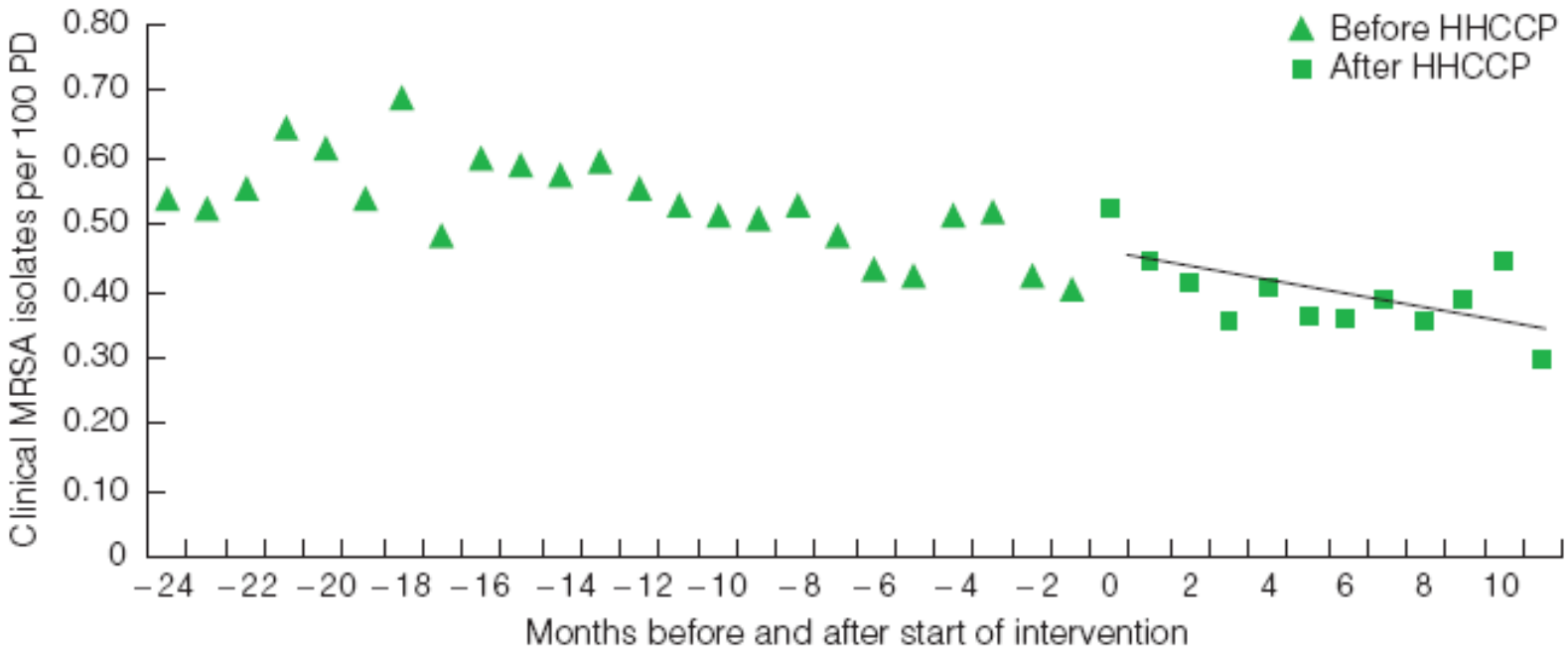


HHCCP = hand hygiene culture-change program. MRSA = methicillin-resistant *Staphylococcus aureus*.
* The number of patients with MRSA bacteraemia per 100 PD fell from 0.029 at 24 months before the intervention to 0.012 at 12 months after the start of the intervention ($P = 0.09$ for trend). ◆

Statewide - MRSA isolates

Total clinical MRSA isolates per month per 100 separations

9 Statewide roll-out: total clinical MRSA isolates per 100 patient discharges (PD) per month before and after introduction of the HHCCP*



HHCCP = hand hygiene culture-change program. MRSA = methicillin-resistant *Staphylococcus aureus*.
* During the 24 months before the introduction of the HHCCP there was a significant reduction in rate of MRSA isolates per 100 PD per month ($P = 0.0003$ for trend). After the start of the intervention, the rate continued to decline, falling to a rate of 0.30/100 PD per month after 12 months ($P = 0.043$ for trend). ◆

Significant reductions in methicillin-resistant *Staphylococcus aureus* bacteraemia and clinical isolates associated with a multisite, hand hygiene culture-change program and subsequent successful statewide roll-out

M Lindsay Grayson, Lisa J Jarvie, Rhea Martin, Paul D R Johnson, Meryanda E Jodoin, Celene McMullan, Roger H C Gregory, Kaye Bellis, Katie Cunnington, Fiona L Wilson, Diana Quin and Anne-Maree Kelly, on behalf of the Victorian Quality Council's Hand Hygiene Study Group and Hand Hygiene Statewide Roll-out Group

Multimodal programs to change hand hygiene (HH) culture have achieved significant sustained improvements in HH compliance by health care workers and reductions in rates of infection with methicillin-resistant *Staphylococcus aureus* (MRSA) and other nosocomial pathogens in individual institutions in Australia and elsewhere.[1-5] Although the World Health Organization and other bodies have advocated large-scale roll-outs of such programs, there are currently no data to support the efficacy of such system-wide initiatives or to describe an optimal approach.[6,7] In fact, some researchers have expressed doubts about whether such programs can be effectively introduced across a range of institutions or as a statewide policy initiative, owing to their perceived dependence on enthusiastic individual champions and the complexity of developing a generic culture-change template that is suitable for multiple disparate institutions.[8]

After the success of a recent single-site HH culture-change program (HHCCP),[1] we assessed the efficacy of a similar, but more focused, centrally coordinated 2-year pilot program in six Victorian health care

ABSTRACT

Objective: To assess the efficacy of a multimodal, centrally coordinated, multisite hand hygiene culture-change program (HHCCP) for reducing rates of methicillin-resistant *Staphylococcus aureus* (MRSA) bacteraemia and disease in Victorian hospitals.

Design, participants and setting: A pilot HHCCP was conducted over a 24-month period (October 2004 to September 2006) in six Victorian health care institutions (4 urban, 2 rural; total beds, 2379). Subsequently, we assessed the efficacy of an identical program implemented throughout Victorian public hospitals over a 12-month period (beginning between March 2006 and July 2006).

Main outcome measures: Rates of hand hygiene (HH) compliance; rates of MRSA disease (patients with bacteraemia and number of clinical isolates per 100 patient discharges [PD]).

Results: Mean HH compliance improved significantly at all pilot program sites, from 21% (95% CI, 20%–22%) at baseline to 48% (95% CI, 47%–49%) at 12 months and 47% (95% CI, 46%–48%; range, 31%–75%) at 24 months. Mean baseline rates for the number of patients with MRSA bacteraemia and the number of clinical MRSA isolates were 0.05/100 PD per month (range, 0.00–0.13) and 1.39/100 PD per month (range, 0.16–2.39), respectively. These were significantly reduced after 24 months to 0.02/100 PD per month for bacteraemia ($P = 0.035$ for trend; 65 fewer patients with bacteraemia) and 0.73/100 PD per month for MRSA isolates ($P = 0.003$; 716 fewer isolates). Similar findings were noted 12 months after the statewide roll-out, with an increase in mean HH compliance (from 20% to 53%; $P < 0.001$) and reductions in the rates of MRSA isolates ($P = 0.043$) and bacteraemias ($P = 0.09$).

Conclusions: Pilot and subsequent statewide implementation of a multimodal HHCCP was effective in significantly improving HH compliance and reducing rates of MRSA infection.

MJA 2008; 188: 633–640

Key lessons learned

1. Validation of HH compliance assessors crucial

- "Victorian" HH compliance tool rather complex

2. Use of MRSA isolate data

- Large numbers = statistical power, *but*…
- Data easily contaminated with screening results in some sites
- Difficult to validate centrally

3. MRSA bacteraemia

- Robust - easily explained to politicians and less open to criticism
- A good outcome measure for HH (impact 60-70%??)

4. National roll-out

- Need simple HH compliance audit tool
- Allows national and hopefully international benchmarking
- ? Prepare for open public disclosure


Thou shalt seek and destroy
Austin Health
Use DeBug™ before and after hospital visits to help stop infections
1 Squirt DeBug™ onto the palm of your hand
DeBug
DeBug
Hand Hygiene Solution

MEDIA MONITORS
INCISIVE INSIGHT

Sunday Herald Sun
25/05/2008
Page: 11
General News
Region: Melbourne Circulation: 620000
Type: Capital City Daily
Size: 99.00 sq.cms
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Poor hygiene at hospitals

FIONA HUDSON

DOCTORS and nurses at some of the state's top hospitals routinely fail to clean their hands, health department audits reveal.

Dozens of hospitals across Victoria didn't meet basic hygiene standards, data obtained by the *Sunday Herald Sun* under Freedom of Information laws shows.

Department of Human Services monitoring revealed staff at the Royal Women's Hospital performed only 20 per cent of "hand hygiene opportunities" correctly.

Audits for the 12 months to January showed Melbourne Health recorded 22 per cent compliance and Austin Health 35 per cent.

Others to record less than 50 per cent included Mercy Health, Eastern Health, Western Health and the Peter MacCallum Cancer Centre.

The State Government launched a crackdown on infection control in 2006. It aimed at reducing the number of people catching deadly superbugs.

Hospitals were expected to achieve an overall mean hand hygiene compliance of 55 per cent by next month.

But the new figures indicated the multi-million-dollar project to install alcohol hand rubs at or near the end of each patient bed and an accompanying education blitz had failed to significantly change staff behaviour.

Staff are supposed to clean their hands before contact with each patient, before any invasive procedures, after any contact with a patient's skin or after touching a patient's chart or bedpan.

Poor hand washing is known to be a major factor in the spread of antibiotic resistant pathogens in hospitals.

The most diligent handwashers worked at Rochester & Elmore District Health, which had 89 per cent compliance.

Department of Human Services Quality Branch director Alison McMillan said the audits were important because there was a strong link between how frequently staff washed their hands and the rate of MRSA infections.

Ms McMillan said compliance rates as low as 20 per cent were "a concern".

"We would look to the organisations to work with their staff to improve that," she said.

WORST OFFENDERS

Health service	Hand wash rate
Royal Women's Hospital	20%
Melbourne Health	**22%**
Gippsland Southern Health Service	24%
Stawell Regional Health	**25%**
Echuca Regional Health	27%
Robinvale District Health Service	**28%**
Austin Health	35%
Southern Health	**37%**
Barwon Health, Alpine Health	39%
Peninsula Health	**40%**
Mercy Health, Western Health	41%
Peter MacCallum Cancer Centre, Eastern Health	**42%**

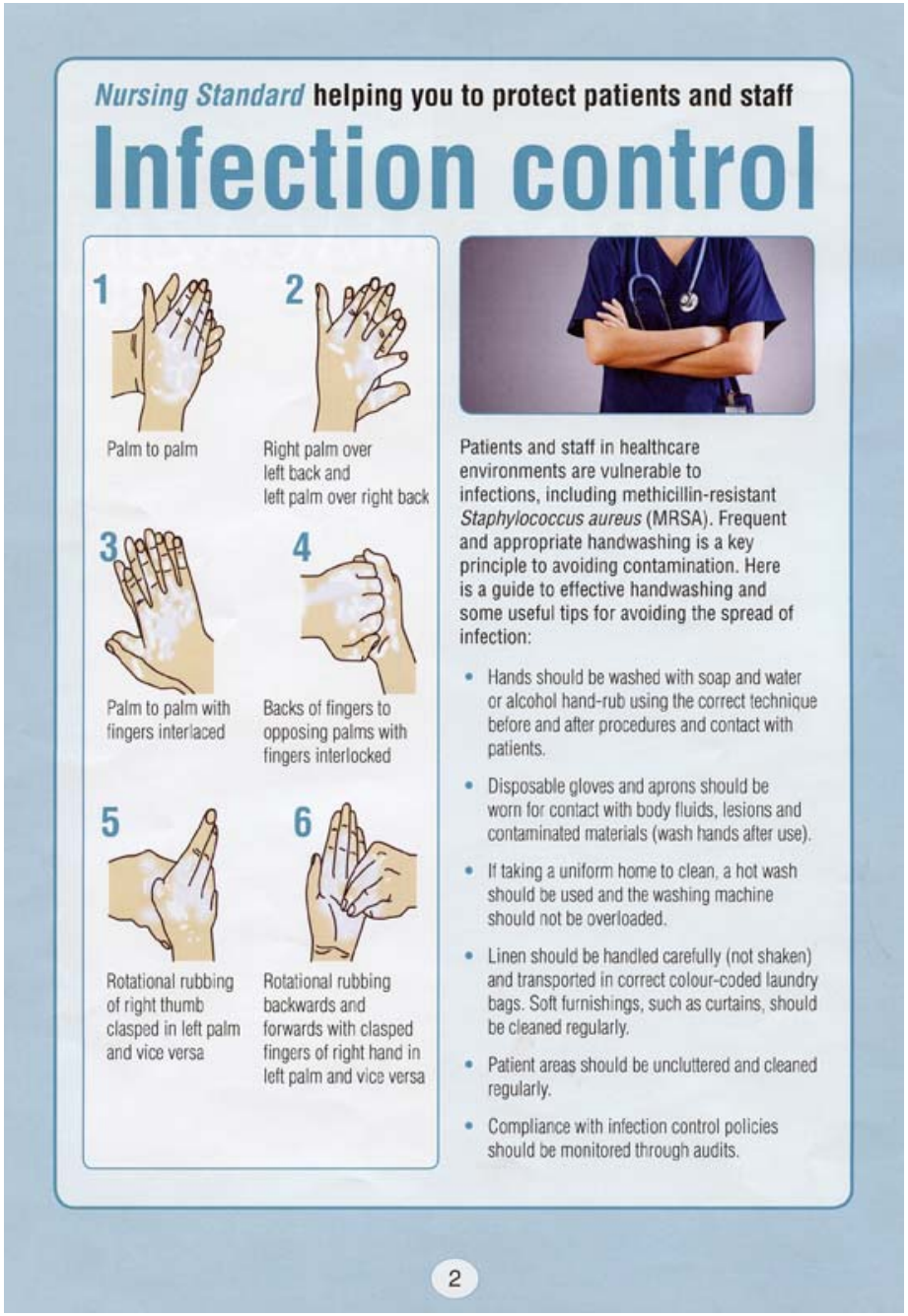
Source: Department of Human Services

Hand Rub Hub


ALL VISITORS
Prevent infection.
DeBug before you visit.
How to use DeBug
ALL VISITORS
Prevent infection.
DeBug before you visit.
Using DeBug red ces
patients' risk of
infection.
Austin Health
LIFTS
1

Open discussion about HH and HAIs in the community

- Year 9 high school literacy exam



Nursing Standard helping you to protect patients and staff

Infection control

1 Palm to palm

2 Right palm over left back and left palm over right back

3 Palm to palm with fingers interlaced

4 Backs of fingers to opposing palms with fingers interlocked

5 Rotational rubbing of right thumb clasped in left palm and vice versa

6 Rotational rubbing backwards and forwards with clasped fingers of right hand in left palm and vice versa

Patients and staff in healthcare environments are vulnerable to infections, including methicillin-resistant *Staphylococcus aureus* (MRSA). Frequent and appropriate handwashing is a key principle to avoiding contamination. Here is a guide to effective handwashing and some useful tips for avoiding the spread of infection:

- Hands should be washed with soap and water or alcohol hand-rub using the correct technique before and after procedures and contact with patients.
- Disposable gloves and aprons should be worn for contact with body fluids, lesions and contaminated materials (wash hands after use).
- If taking a uniform home to clean, a hot wash should be used and the washing machine should not be overloaded.
- Linen should be handled carefully (not shaken) and transported in correct colour-coded laundry bags. Soft furnishings, such as curtains, should be cleaned regularly.
- Patient areas should be uncluttered and cleaned regularly.
- Compliance with infection control policies should be monitored through audits.

2

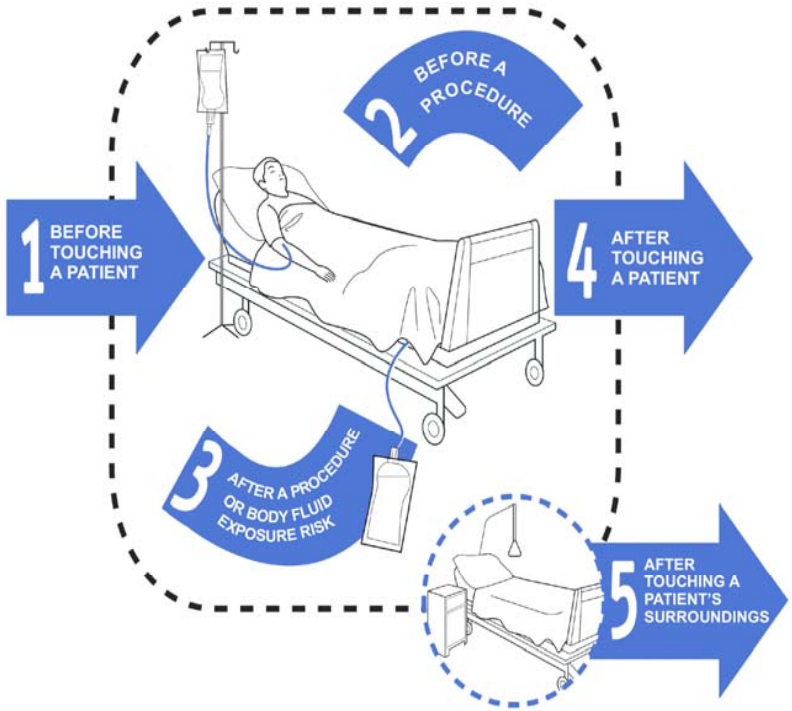
Open discussion about HH and HAIs in the community

- Year 9 high school literacy exam


WORLD ALLIANCE
for PATIENT SAFETY
Clean Care is Safer Care
World Health Organization

Hand Hygiene Australia

5 Moments for HAND HYGIENE



AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTHCARE

World Health Organization

National Hand Hygiene Initiative

- Public hospitals - all States and Territories
- Two key outcome measures:
  - HH compliance – 3 audits/year
  - Monthly *S. aureus* bacteraemia rates
- Private hospitals now joining program
- Close collaboration with New Zealand

Hand Hygiene:

"Before and after every patient contact"

Patient contact =

- touching the patient,
- their immediate surroundings or
- performing any procedure

HHA-WHO “5 Moments”

1. Before touching the patient
   (and their immediate surroundings)
2. Before a procedure
3. After a procedure or Body Fluid Exposure Risk
4. After touching the patient
   (and their immediate surroundings)
5. After touching the immediate surroundings when you have not touched the patient

Standardisation & validation of HH Compliance assessors crucial

- Inter-rater reliability – “gold” standard
- Intra-rater reliability
- Provides valid comparable data

HH Compliance Auditing

Standardisation & validation of assessors

- Crucial for national reporting
  - Cannot audit unless validated
- Two-day training workshop

Two components:

- Theoretical validation
  - Written test - need >90%
  - DVD-video *Moments* test - >90% consistency
- Practical validation
  - Observe ≥100 Moments on wards - >90% consistency

Standardised HH compliance data

No. options:

- Manual entry
- Direct on-line entry
- Hand-held data recording devices
  - Direct data entry

Hand Hygiene observation - Data collection form.

Health Service:

Ward:

Date: ____ / ____ / ______

Observer: Session No.:

Start Time: Finish Time

Duration of Session: mins

Database Record No.:

FIVE MOMENTS FOR HAND HYGIENE:

1. Before patient contact
2. Before a procedure
3. After a procedure or body fluid exposure risk
4. After patient contact
5. After contact with patient surroundings

Notes

Hcw	Moment	Action	Gloves	Hcw	Moment	Action	Gloves	Hcw	Moment	Action	Gloves
	○ 1 ○ 2 ☐ 3 ☐ 4 ☐ 5	☐ rub ☐ wash ☐ missed	○ on ☐ off ☐ cont.		○ 1 ○ 2 ☐ 3 ☐ 4 ☐ 5	☐ rub ☐ wash ☐ missed	○ on ☐ off ☐ cont.		○ 1 ○ 2 ☐ 3 ☐ 4 ☐ 5	☐ rub ☐ wash ☐ missed	○ on ☐ off ☐ cont.
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Hand Hygiene Report

10 East

16/06/2008 - 16/06/2008

Total Compliance

Total Performed	Total Moments	Compliance
36	50	72.00%

Total By Moment

Moment	Performed	Total	Compliance
1 - Before Patient Contact	6	10	60.00%
2 - Before a Procedure	4	6	66.67%
3 - After a Procedure or Body Fluid	5	8	62.50%
4 - After Patient Contact	8	10	80.00%
5 - After Contact With Patient Surroundings	13	16	81.25%

Compliance By HCW

HCW	Total Performed	Total Moments	HCW Compliance
PSA	2	4	50.00%
RN	34	46	73.91%

Total Glove Compliance

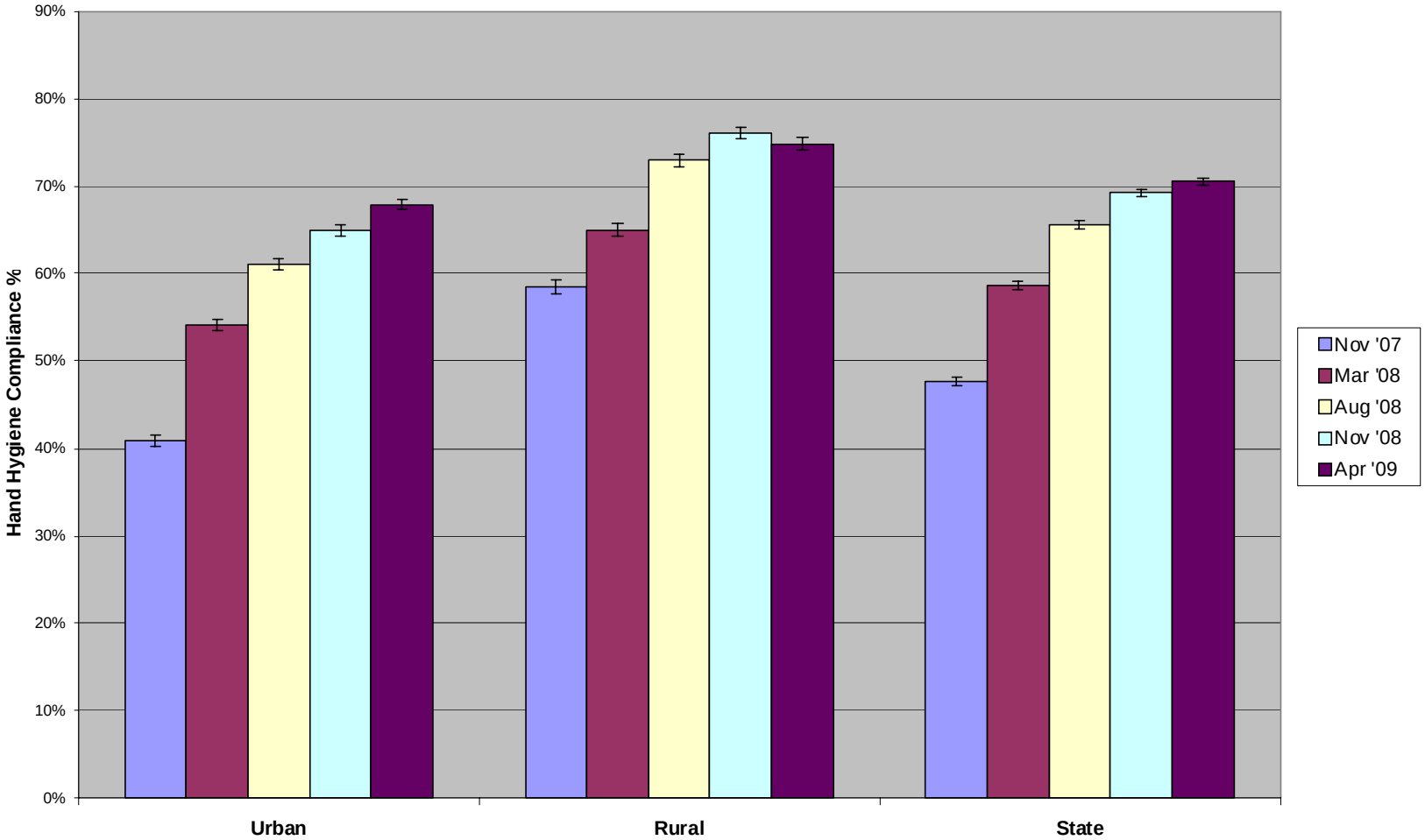
Glove Use	Performed	Moments	Glove Compliance
Off	4	5	80.00%
On	1	4	25.00%

Total Product Usage

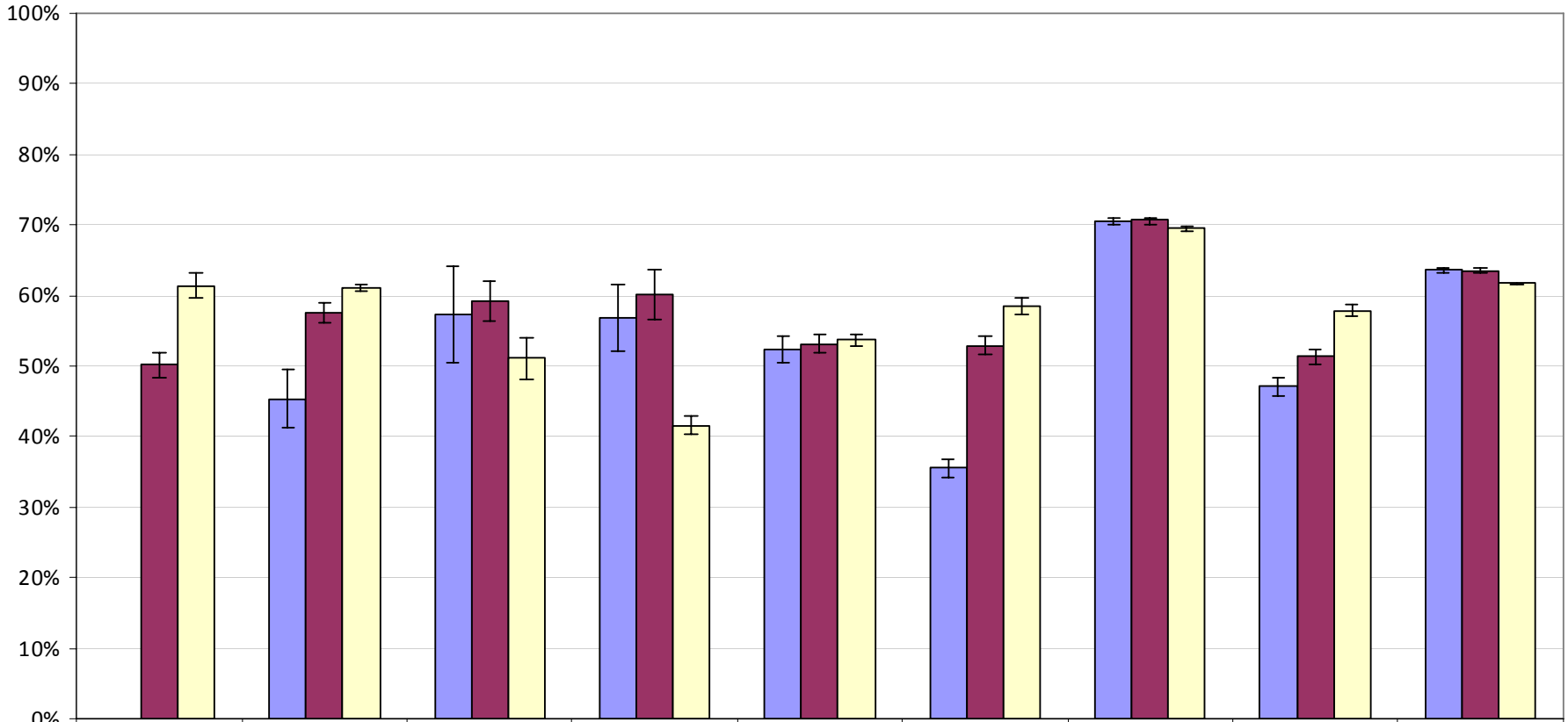
Description	HH Performed	Total Performed	Percentage Usage
Alcohol Based Hand Rub	Rub	34	68.00%
Hand Hygiene not performed	Missed	14	28.00%
Wash	Wash	2	4.00%

Recent Victorian HH Compliance using 5 Moments

(Feb/Mar 09)

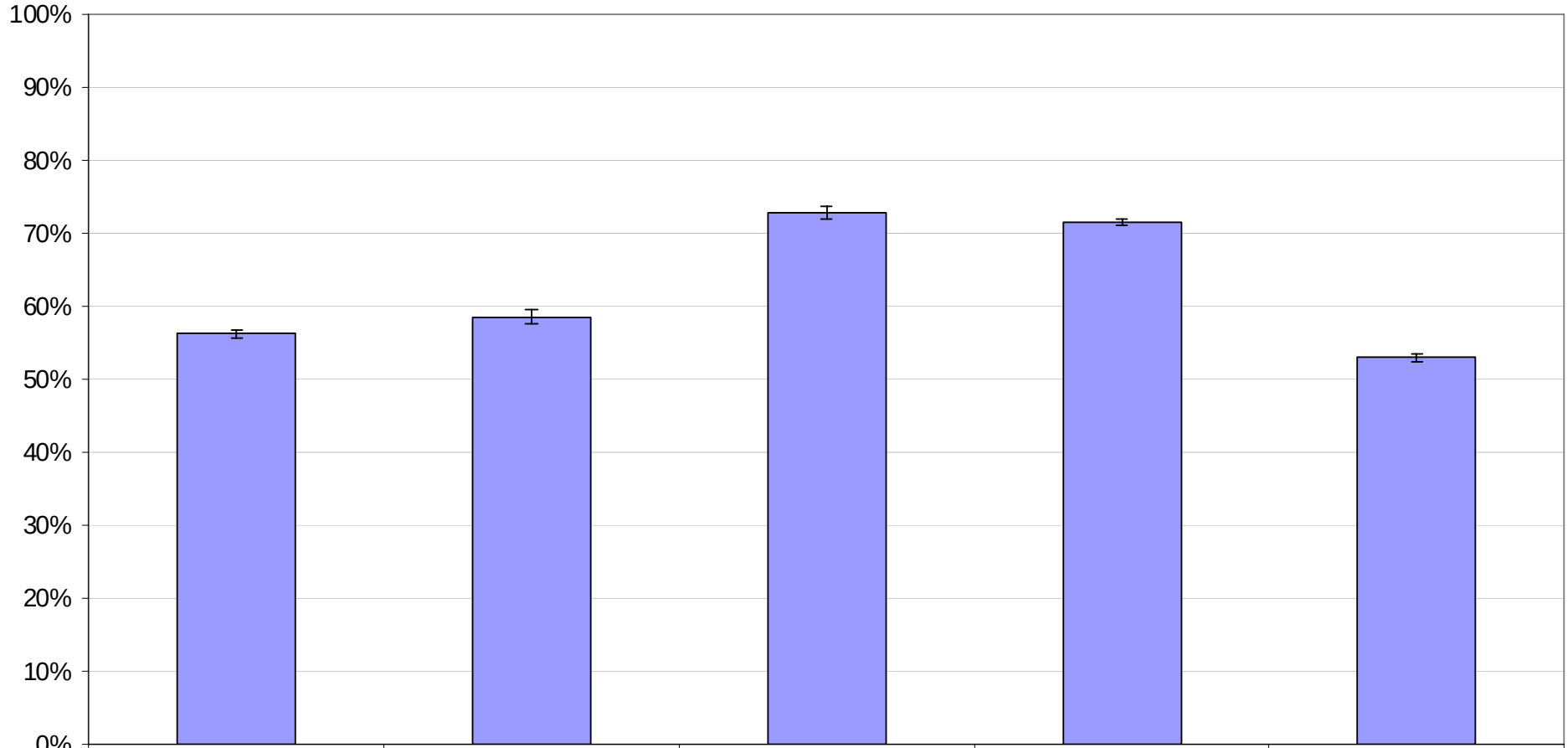


National Hand Hygiene Compliance rates Audit periods 1, 2 and 3 - 2009
Hand Hygiene Australia



	A	B	C	D	E	F	G	H	National
Period 1 (n=105)		45.3%	57.4%	56.9%	52.3%	35.5%	70.5%	47.0%	63.6%
Period 2 (n=168)	50.1%	57.5%	59.2%	60.2%	53.2%	52.9%	70.8%	51.3%	63.5%
Period 3 (n=290)	61.4%	61.0%	51.1%	41.6%	53.8%	58.5%	69.5%	57.8%	61.8%

National Hand Hygiene Compliance Rates by Moment - 290 Public and Private Facilities
Period 3 2009



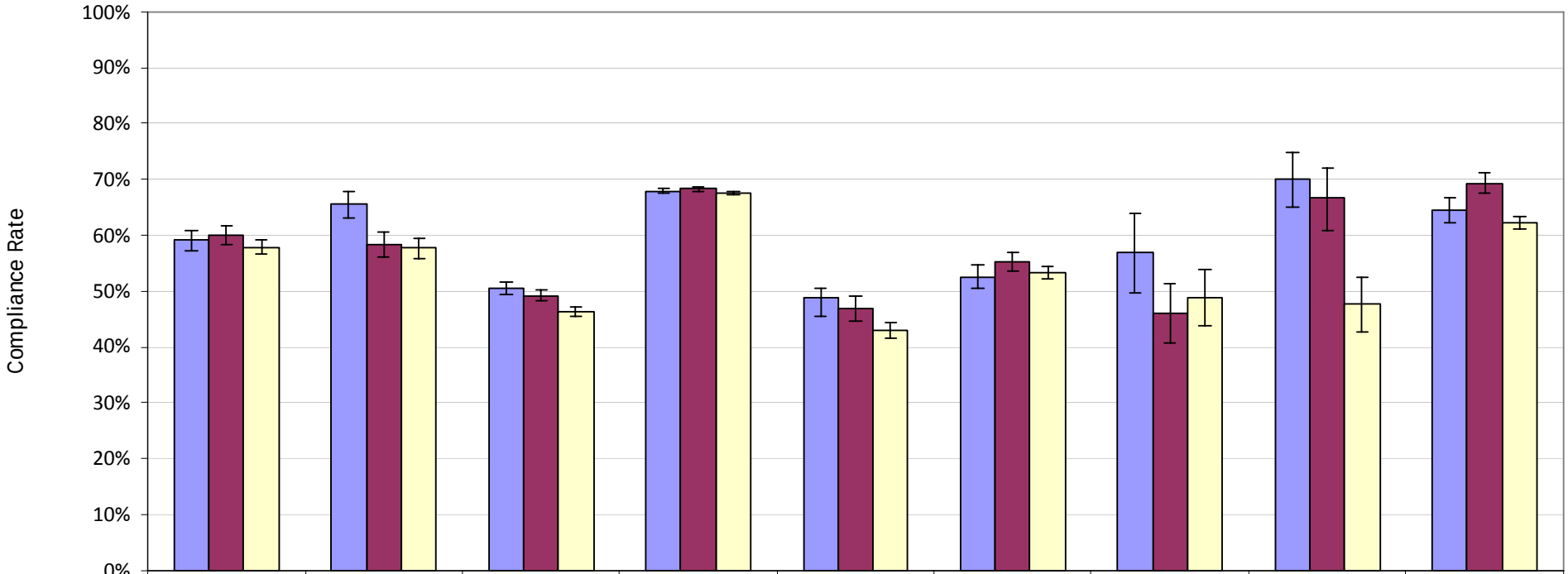
	Moment 1 (n=35900)	Moment 2 (n=8664)	Moment 3 (n=12478)	Moment 4 (n=36925)	Moment 5 (n=32586)
Series1	56.2%	58.5%	72.8%	71.5%	53.0%

Moment (n=number of Moments)

National Hand Hygiene Compliance rates by Healthcare Worker

Audit periods 1 , 2 & 3 - 2009

Hand Hygiene Australia

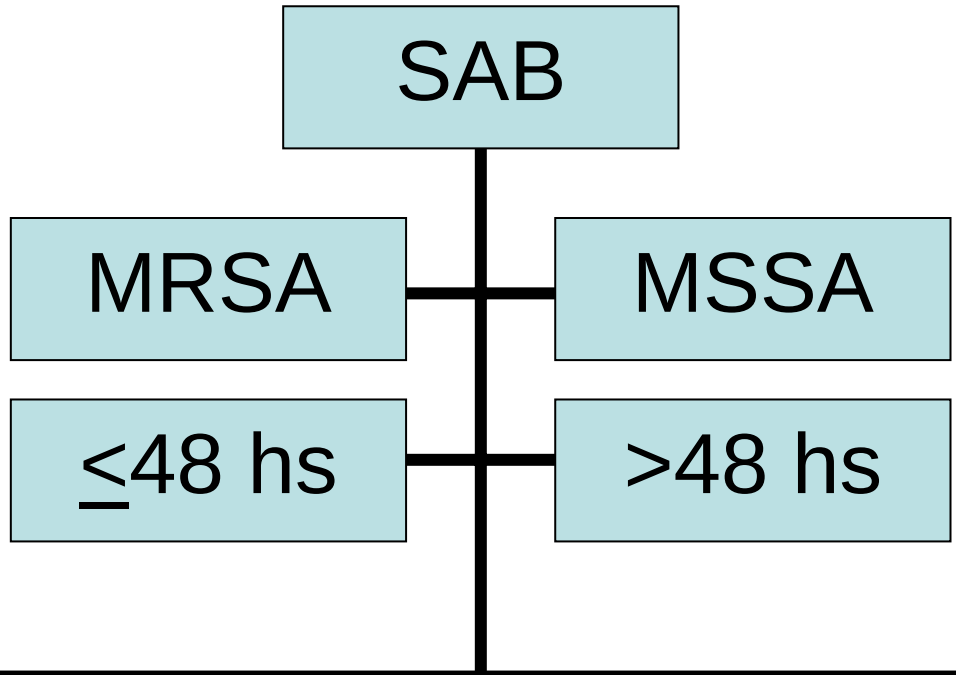


	Allied Health	Blood Nurse	Medical Staff	Registered Nurse	Other	Patient Services Attendant	Student Alllied Health	Student Medical staff	Student Nurse
Period 1	59%	66%	51%	68%	49%	53%	57%	70%	65%
Period 2	60.0%	58.3%	49.2%	68.3%	46.9%	55.2%	46.0%	66.7%	69.4%
Period 3	57.9%	57.7%	46.3%	67.5%	43.0%	53.3%	48.8%	47.6%	62.2%

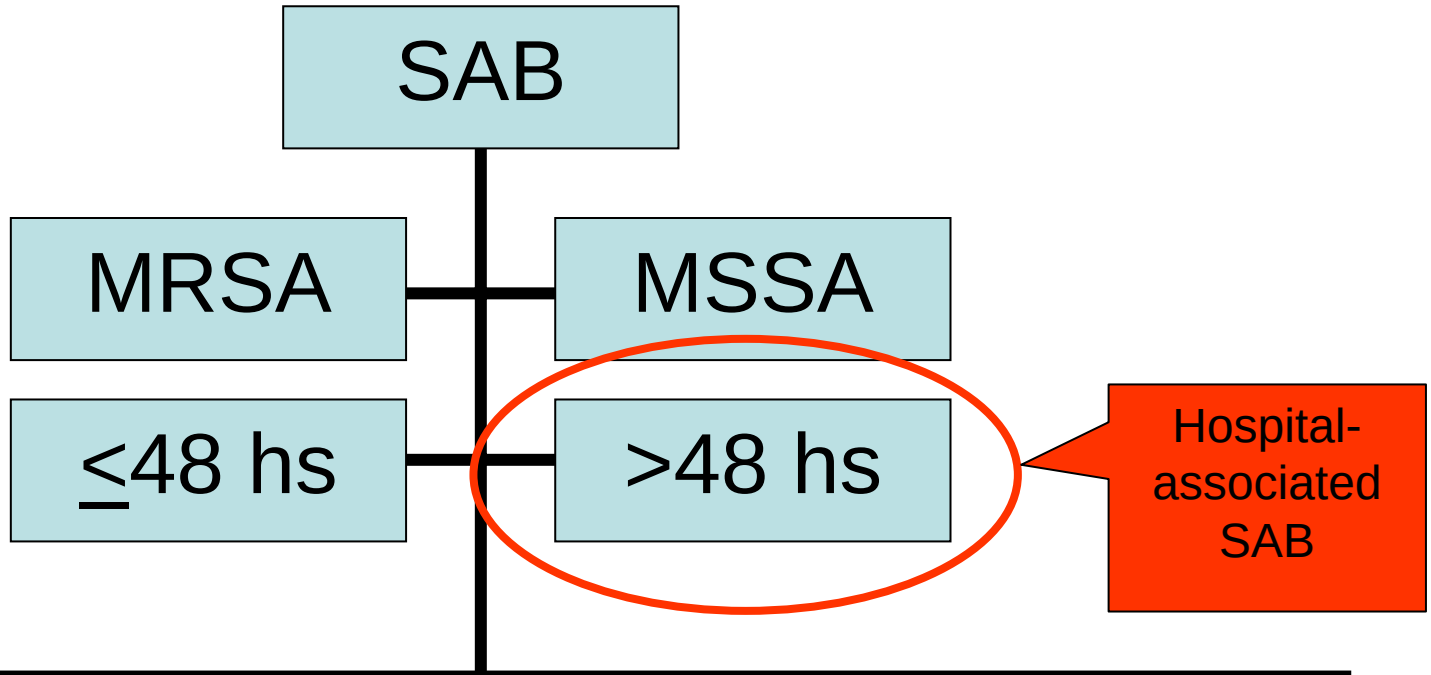
Healthcare worker category

AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

A National System for Recording *Staphylococcus aureus* bacteraemia (SAB)



- Is associated with the presence of an indwelling medical device
- Occurs within 30 days of a medical procedure where the BSI is related to the surgical site
- An invasive instrumentation or incision related to the BSI was performed within 48 hours
- Associated with neutropenia (<1 x 109/L) contributed to by cytotoxic therapy



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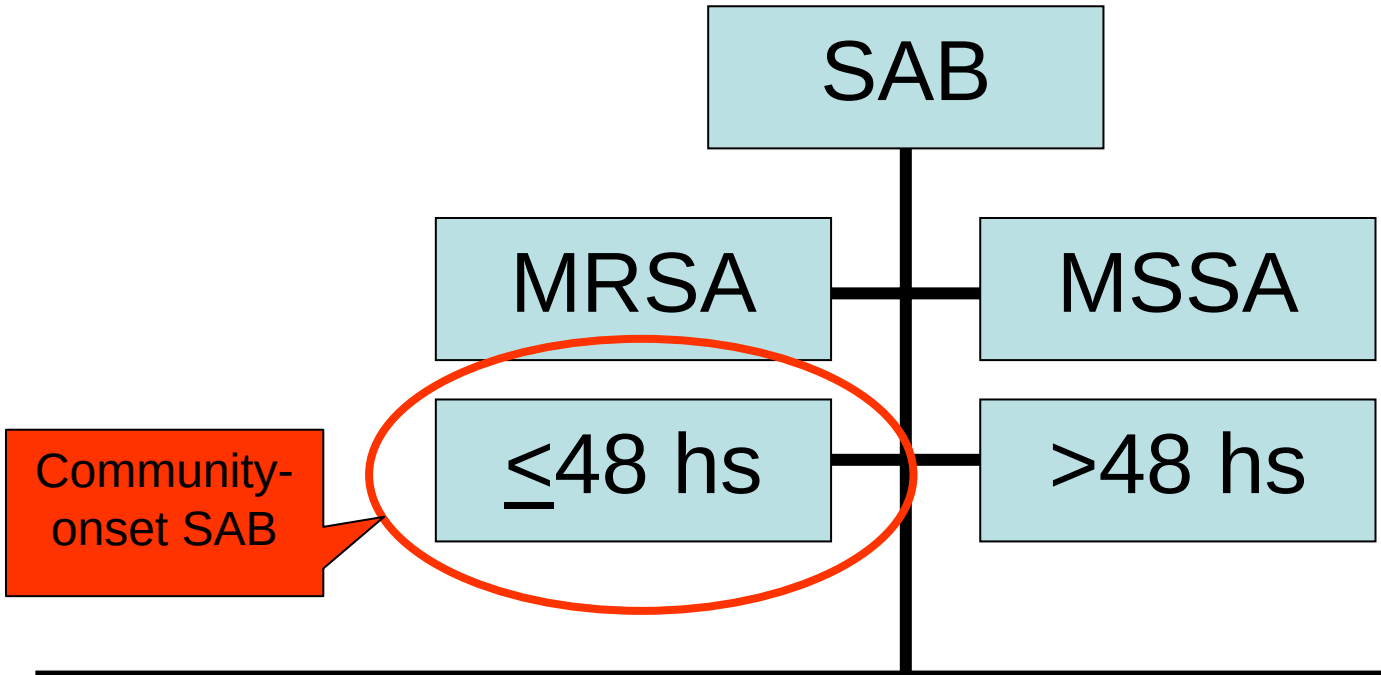

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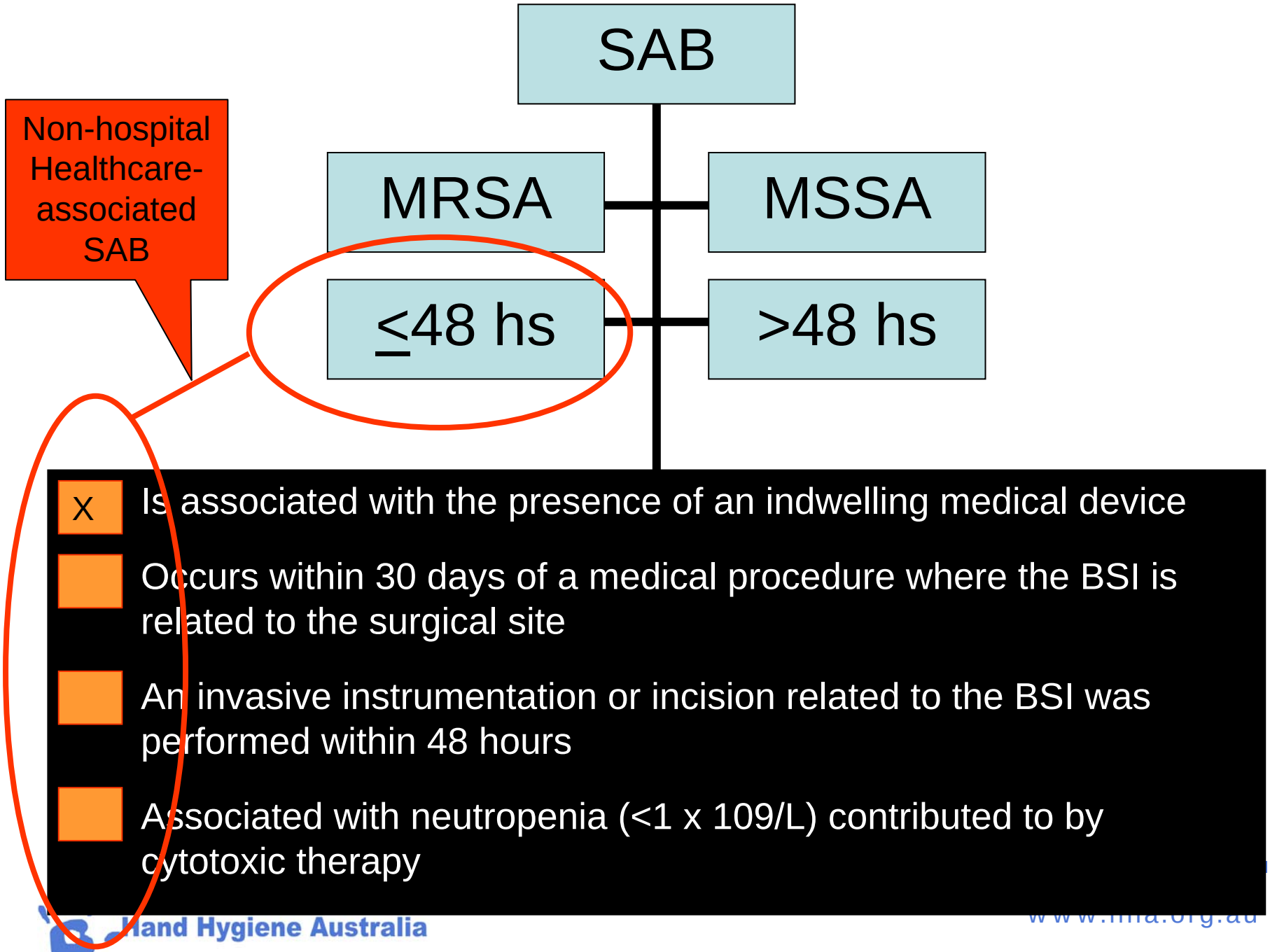
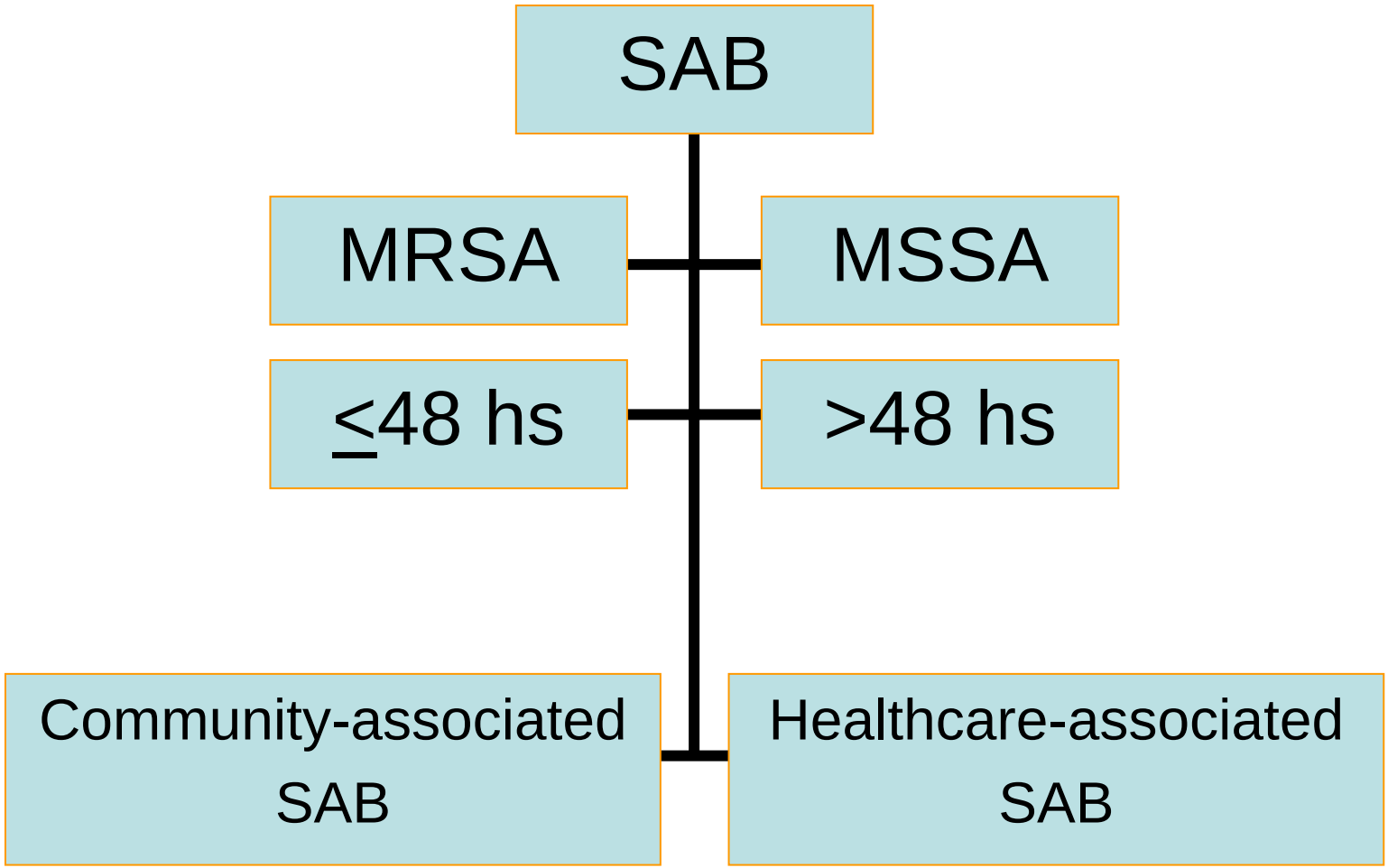

SAB
Non-hospital Healthcare-associated SAB
MRSA
MSSA
≤48 hs
>48 hs
X
Is associated with the presence of an indwelling medical device
Occurs within 30 days of a medical procedure where the BSI is related to the surgical site
An invasive instrumentation or incision related to the BSI was performed within 48 hours
Associated with neutropenia (<1 x 109/L) contributed to by cytotoxic therapy


SAB
MRSA
MSSA
≤48 hs
>48 hs
Community-associated SAB
Healthcare-associated SAB

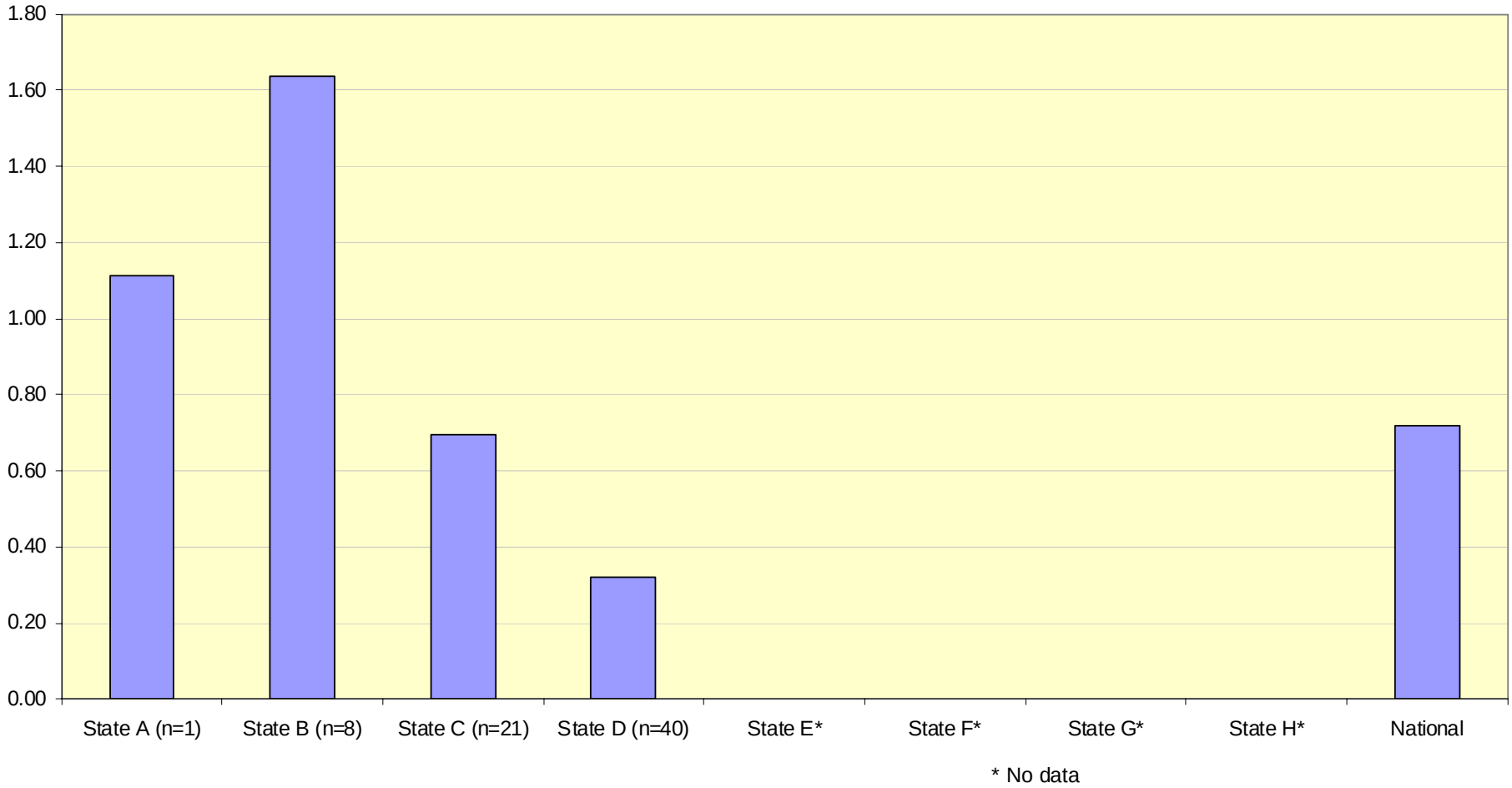
Initial results
Australian SAB data

- Data from 5 of 8 States/territories
  - Remainder to follow
  - Some politics

- 24 mths retrospective data to follow
- Being viewed as the “blue-print” for a national system of nosocomial infection surveillance
- Federal to State health funding to be linked to SAB rates

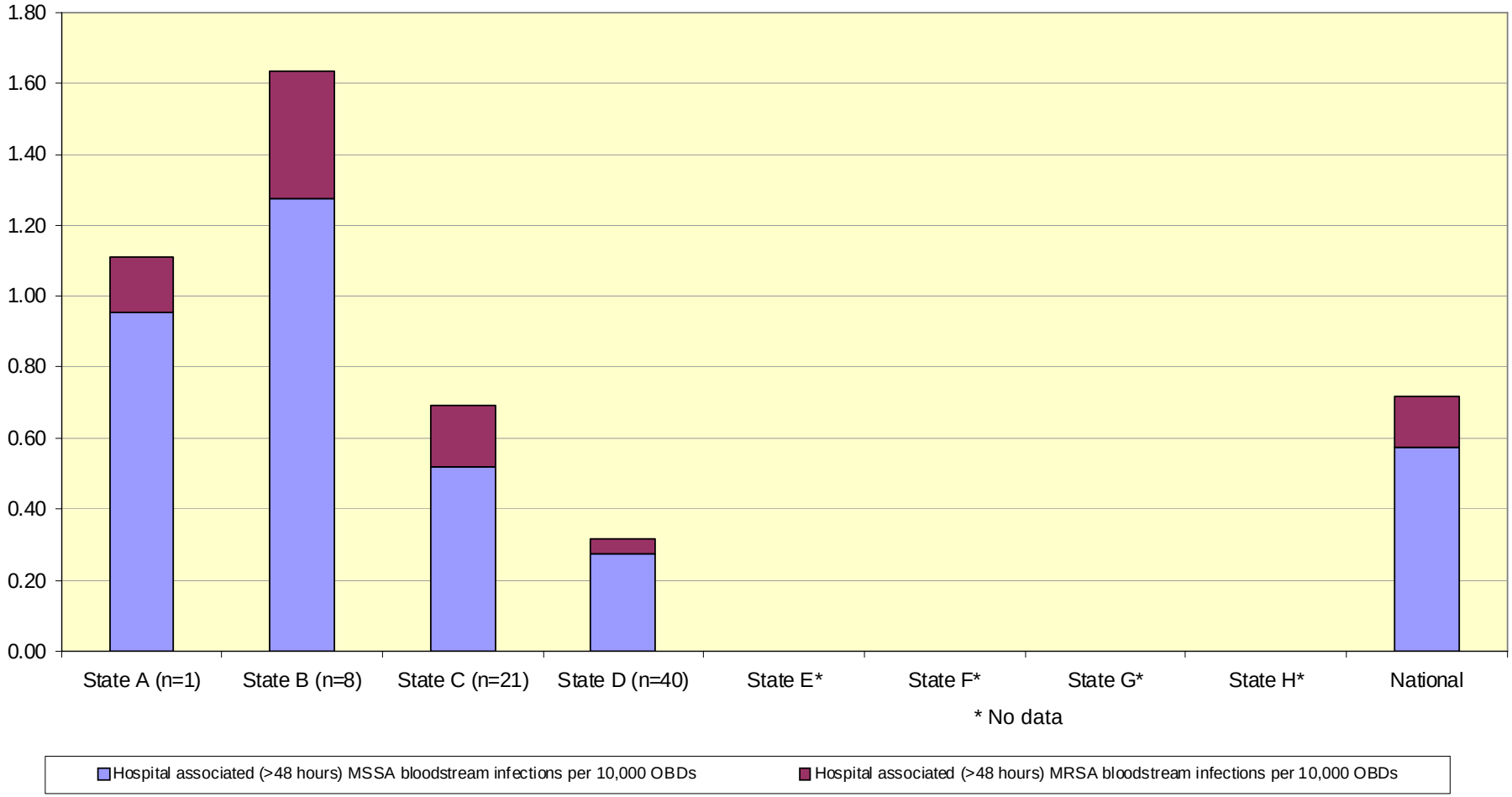
Hospital associated (> 48 hours) SAB bloodstream infections per 10,000 OBDs

Jan - Mar 2009

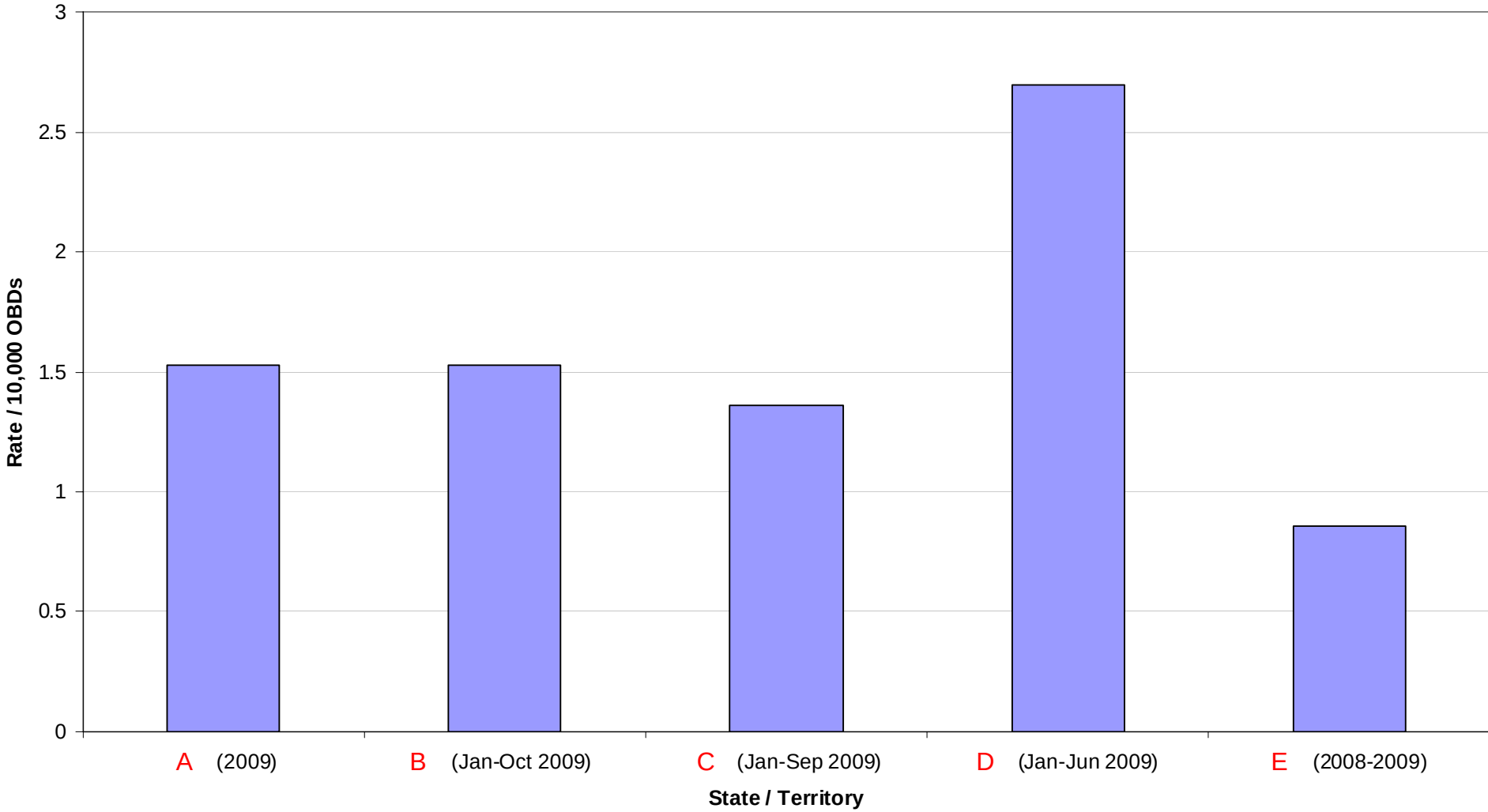


Hospital associated (> 48 hours) MSSA and MRSA bloodstream infections per 10,000 OBDs

Jan - Mar 2009



Staphylococcus aureus bacterameia rate per 10,000 Occupied Bed Days



Potential problems with SAB reporting

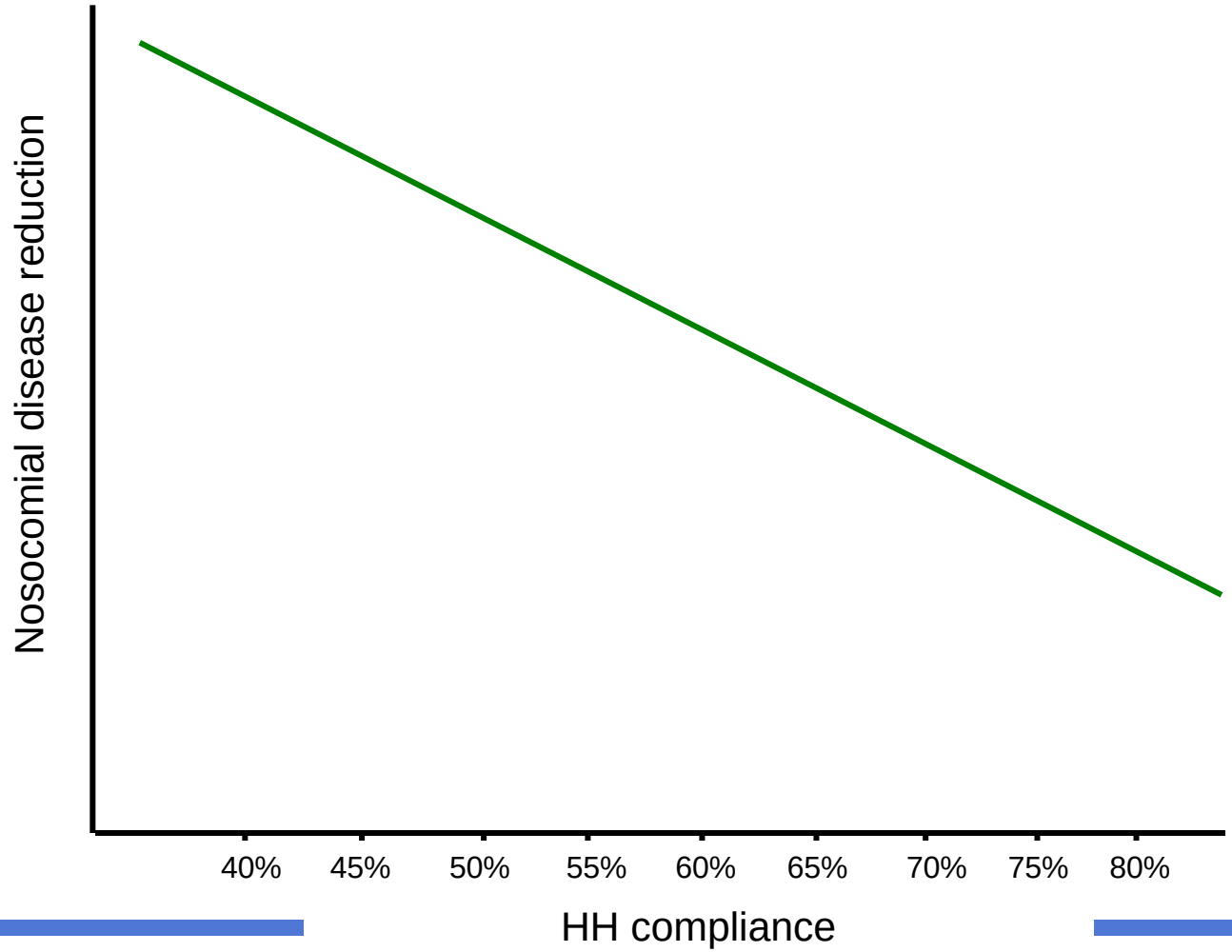
- Because of funding implications
  - now highly political
  - Accurate lab data vs ICD-10 data
- If lab data, which denominator?
  - Occupied bed days vs patient discharges
  - Some States currently vary
- Silly details
  - Does a pregnant woman = I or 2 admissions?
- System of national SAB data progressing
  - but some delays in nationwide definitions
  - Sense of political anxiety in some States

Politics and the future for HH

Robust reporting system

- Important for long-term sustainability
- Needs to be easily understood
  - HCWs, patients
  - Politicians and voters
  - CEOs
- Eventually needs to become embedded in the hospital's quality reporting (funding) matrix

Correlation between HH compliance and disease reduction



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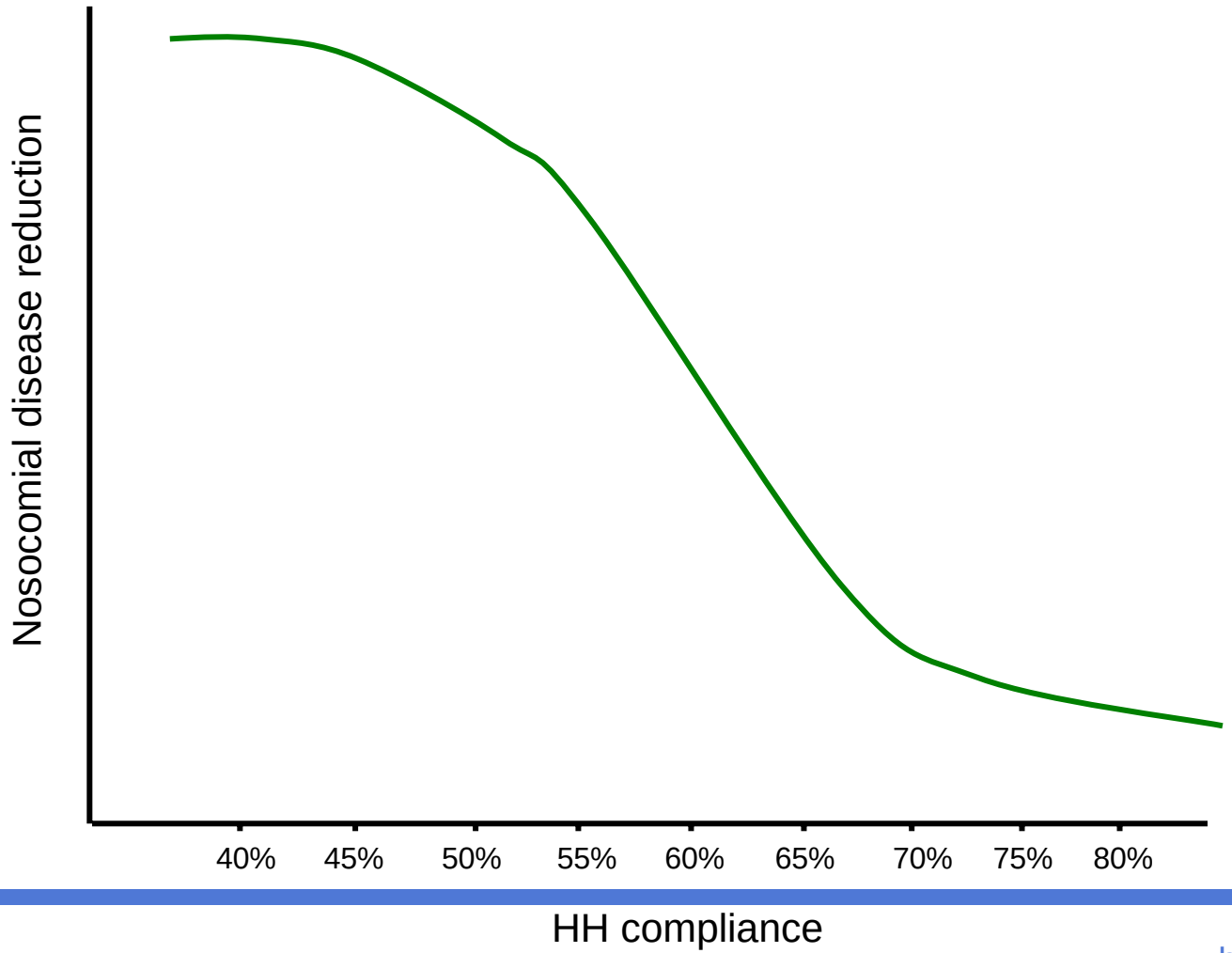

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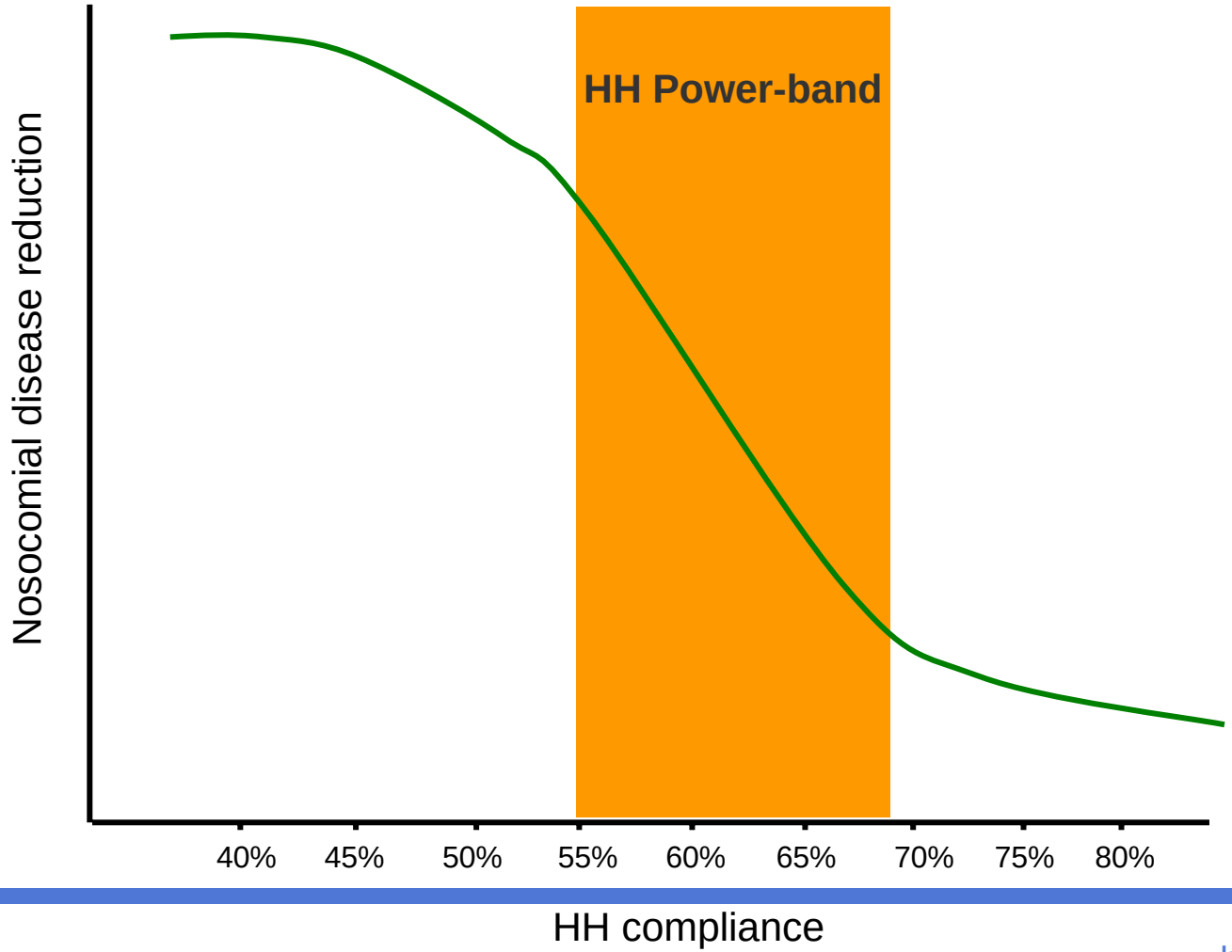

	Compliance Rate	Stars
Hand Hygiene Compliance Rate - Overall	Overall HH Compliance between < 30%	0
	Overall HH Compliance between = 36-40%	1
	Overall HH Compliance between = 46-50%	2
	Overall HH Compliance between = 56-60%	3
	Overall HH Compliance between = 66-70%	4
	Overall HH Compliance between >75%	5

- Avoids focus on exact % HH compliance
- Consistent with “Power-band” disease reduction
- Simple

	Hand Hygiene Compliance rating
Austin Hospital	
Victoria	
Australia	

Sample only

Based on current Victorian report

HOSPITAL	COMPLIANCE RATE	95% CI	STAR RATING
District Hospital	75%	66-82%	
Regional Health	75%	66-82%	
Memorial Hospital	74%	67-79%	
Regional Health Service	71%	59-81%	
Health	70%	68-72%	
Health Service	67%	58-76%	
Health	66%	64-68%	
Health	66%	63-69%	
Health	65%	63-67%	
Health Service	64%	61-68%	
Base Hospital	61%	51-69%	
Health Service	57%	43-69%	
Health Service	55%	48-61%	
Health	54%	52-56%	
Regional Health Service	47%	48-61%	
Health Service	45%	35-55%	
Health	44%	42-45%	
State Average Hand Hygiene Compliance	**70%**		

Sample only

SUMMARY

Impact of Hand Hygiene improvement on health care-associated infection

- Clear data from numerous sites that improved HH reduces HAIs associated with *S. aureus*
  - Issue less clear for other pathogens (not VRE or *C. difficile*)
- HH programs cost-effective
  - ≥ $2 saved for each $1 spent
- SAB a robust outcome measure for HH effectiveness
- Establishment and embedding of national HH programs
  - Time-consuming and laced with politics
  - SAB – a politically useful HH outcome measure
- Establishment of national system for SAB data
  - A potential “blue-print” for other pathogens

Australasia - S.E. Asia Hand Hygiene Collaborative

Inaugural Workshop - Sponsored by Hand Hygiene Australia

Novotel Rockford, Palm Cove, Queensland

Friday 18 to Saturday 19 June 2010

We would like to invite you to attend the Australasia - S.E. Asia Hand Hygiene Collaborative (ASEAHHC) Inaugural Workshop to be held at the Novotel Rockford, Palm Cove, Queensland from Friday 18 to Saturday 19 June 2010.

The ASEAHHC Inaugural Workshop presents a unique opportunity to be informed about the latest developments with hand hygiene and network with other key stakeholders from this region. The workshop includes a number of key international speakers including:

Didier Pittet, MD, MS
Professor of Medicine, Director of the Infection Control Programme,
University of Geneva Hospitals and Faculty of Medicine, Switzerland.
Lead, WHO First Global Patient Safety Challenge "Clean Care is Safer Care"

Andreas Voss, MD, PhD
Professor of Infection Control, Radboud University,
Medical Centre and Canisius-Wilhelmina Hospital, Nijmegen, The Netherlands

Andreas F. Widmer, MD, MS
Division of Infectious Diseases & Hospital Epidemiology Head,
University Hospital Basel, Basel, Switzerland

Other international presenters include:
Sally Roberts, Hand Hygiene New Zealand
Dale Fisher, National University Hospital, Singapore
Nordiah Jalil, National University of Malaysia, Malaysia
Michael Dokup, Mt Hagen Hospital, Papua New Guinea

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