



Australasian College  
for Infection Prevention and Control  
**2014 CONFERENCE**

Adelaide, SA | 23rd - 26th November 2014 | Adelaide Convention Center

# CONFERENCE PROGRAM AND ABSTRACT BOOK

[www.acipc.org.au](http://www.acipc.org.au)

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## ACIPC 2014 Conference Manager

Paul Hogson **ACIPC, Marketing & Event Manager**

**Published in** 2014 College For Infection Prevention and Control

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# WELCOME LETTER

## ACIPC Conference 2014

It gives me great pleasure to welcome you to Adelaide on behalf of the Australasian College for Infection Prevention and Control (ACIPC). This year's conference features highly respected international and national speakers who will share, discuss, debate, and dissect significant new developments and scientific advancements that will impact the future of infection prevention and control. The scientific program provides a robust, evidence-based and cutting-edge conference for delegates to be reinvigorated in their role or connection with the field of infection prevention and control.

Aside from the excellent scientific program, we have also prepared an exciting social program that will provide delegates an opportunity to explore, indulge and relax during their stay in Adelaide. The Welcome Reception and Gala Dinner will give participants a chance to network among colleagues while enjoying the cuisine, culture, and warm hospitality that 'the perfect host city' of Adelaide has to offer. Take the opportunity to explore this bustling city's unique blend of historic buildings, parklands, Kangaroo Island or just enjoy Australia's self-proclaimed wine capital.

I take this opportunity to acknowledge and thank our medical industry partners – 3M, Baxter, Bbraun, JnJ, Terumo and Whiteley. These partnerships are critical to the success of our conference and these partners with ACIPC are committed to the future of infection prevention and control. I encourage you to take the time in our exhibition to have a chat, gain information and review the clinical products available to assist in managing healthcare associated infection.

A special note of thanks to the Scientific and Conference organising committees for the wonderful program we are about to embark upon. I encourage the delegates to relish the opportunity the conference provides you to learn, consolidate, network and enjoy the company of innovative like-minded people.

Cheers,

**Belinda Henderson**  
ACIPC, President

## Conference Organising Committee

**Rosie Lee - (Convenor)** - Coordinator | Infection Prevention & Management, Royal Perth Hospital  
**Lindy Ryan** - Infection Control Clinical Nurse Consultant, Nepean Blue Mountains Local Health Network  
**Glenys Harrington** - Consultant, Infection Control Consultancy (ICC)  
**Lincoln Fowler** - Clinical Nurse Specialist Infection Control, Child and Adolescent Community Health  
**Robyn Donnellan** - Clinical Nurse Consultant Infection Prevention and Control for NNSW and MNC LHD  
Northern NSW and Mid North Coast Local Health Districts  
**Sally Healy** - Clinical Nurse Consultant Infection Control  
**Toni Schouton** - Clinical Quality Manager | Clinical Governance Unit  
**Rebecca Adams** - Princess Alexandra Hospital, QLD  
**Lisa Ryan** - Infection Control, Calvary Hospital, SA  
**Belinda Henderson** - Clinical Nurse Consultant, Princess Alexandra Hospital

## Scientific Organising Committee

**Glenys Harrington (Convenor)** - Infection Control Consultancy (ICC), Melbourne, VIC  
**Caroline Marshall** - Associate Professor, Department of Medicine, University of Melbourne and Victorian Infectious Diseases Service Royal Melbourne Hospital  
**Ruth Barratt** - Clinical Nurse Specialist Infection Prevention & Control New Zealand  
**Claire Rickard** - Professor NHMRC Centre for Research Excellence in Nursing Griffith University  
**Morgyn Warner** - Consultant Physician, Microbiology & Infectious Diseases SA Pathology  
(at the Queen Elizabeth Hospital)

## INVITED SPEAKERS

### **Diane Jacobsen, MPH CPHQ.**

*Director, Institute for Healthcare Improvement (IHI)*



Diane Jacobsen MPH, CPHQ, is a Director at the Institute for Healthcare Improvement (IHI) in Cambridge, MA USA. Since 2002, she has supported numerous improvement initiatives on clinical and service topics in the role of faculty, director, improvement leader and coach. Ms. Jacobsen has directed IHI's work on antibiotic stewardship in partnership with the Centers for Disease Control and Prevention, served as the IHI content lead and improvement advisor for the California Healthcare-Associated Infection Prevention Initiative (CHAIP) and has directed improvement collaboratives on topics including: Reducing Sepsis Mortality, Patient Flow, Reducing Surgical Complications, Reducing Hospital Mortality Rates (HSMR) and co-directed IHI's Spread Initiative. She has also directed IHI Expeditions (web-based trainings designed to support organizations in their improvement efforts) including: Hand Hygiene, Antibiotic Stewardship, Reducing C.difficile Infection, Appropriate use of Blood Products, Sepsis, Preventing CA-UTIs and served as faculty for IHI's 100,000 Lives and 5 Million Lives. Ms. Jacobsen is an epidemiologist with experience in quality improvement, risk management, and infection control in specialty, academic, and community hospitals. A graduate of the University of Wisconsin, she earned her master's degree in Public Health- Epidemiology at the University of Minnesota and is currently a student in the Taos Institute PhD Program in conjunction with Tilburg University.

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### **Marin L. Schweizer, PhD,**

*Assistant Professor of Internal Medicine - General Internal Medicine,*

*Assistant Professor of Epidemiology University of Iowa, Carver College of Medicine*



Dr. Schweizer is an Assistant Professor of Internal Medicine at the University of Iowa Carver College of Medicine. She received her PhD in Epidemiology from the University of Maryland, Baltimore, where she also completed postdoctoral work in molecular epidemiology. Her current focus is developing and evaluating evidence based strategies to reduce the prevalence of and poor outcomes associated with healthcare-associated infections, specifically Staphylococcus aureus infections and surgical site infections.

# GENERAL INFORMATION

## Disclaimer

The information in this brochure is correct at the time of printing. The Conference Manager reserves the right to change any aspect of the program without notice.

## Venue

Adelaide Convention Centre  
North Terrace, Adelaide South Australia 5000

## Registration Desk

All enquiries should be directed to the registration desk which will be open at the following times

Sunday 23 November	: 07.30 - 18.00
Monday 24 November	: 07.30 - 18.30
Tuesday 25 November	: 07.30 - 18.00
Wednesday 26 November	: 07.30 - 15.00

## Speaker Preparation Room

A speaker preparation room will be located in Lounge C near the registration desk

This room will be open at the following times:

Monday 24 November and Tuesday 25 November	: 7.30am – 5.00pm
Wednesday 26 November	: 7.30am – 1.00pm

A technician will be available in the speaker preparation room to assist you and to discuss any audio visual queries you may have. You will also have the opportunity to practise your presentation.

All speakers must take their presentation to the speaker preparation room a minimum of four hours prior to their presentation or the day before if presenting at a morning session.

If you are not providing slides for your presentation, please advise the AV technician in the speaker preparation room two hours prior to your session.

## Exhibition

The exhibition will be located in Hall H. All conference day catering will also be served in this area.



# GENERAL INFORMATION

The exhibition will be open during the following hours:

Monday 24 November and Tuesday 25 November: 9.00am – 5.00pm

Wednesday 26 November: 9.00am – 1.15pm

## Poster Displays

Posters will be displayed for the duration of the conference in the rear of Hall H.

Monday 24 November and Tuesday 25 November: 9.00am – 5.00pm

Wednesday 26 November: 9.00am – 1.15pm

## Internet Hub

An internet hub, proudly sponsored by Baxter is located in the exhibition hall, stand number 15. The computers will allow delegates to:

- Print a certificate of attendance
- Check personal emails via internet

## Wireless Internet

Wireless internet will be available in the Convention Centre. In order to receive the access instructions please visit the Conference Management at the registration desk.

## Catering

Morning teas, afternoon teas and lunches will be held in Exhibition Hall H each day. Lunches will be served as an informal stand-up buffet. Dietary requirements noted on your registration form have been passed on to the catering staff. Vegetarian options will be available on the buffets. A separate buffet station will be available for other specific dietary requirements such as vegan and gluten intolerance. Please ask the venue staff at this station for assistance.

At the conference dinner, special dietary requirements such as vegetarian, gluten free meals will only be available for those who have previously advised during the registration process.

If you wish to have a vegetarian meal and have not booked one, please see the staff at the Registration Desk to advise prior to the dinner.

## Emergency and Evacuation Procedures

In the event of an emergency, such as a fire, the venue staff will direct delegates accordingly.

# GENERAL INFORMATION

## Smoking

This Conference has a no smoking policy.

## Mobile Phones /Beepers

As a courtesy to all delegates and speakers, please switch off, or set to silent, your mobile phones during all sessions.

## Messages

A message board is situated near the Conference Registration Desk and should be checked regularly.

The Conference Organisers do not accept responsibility for personal mail. Please have all mail sent to your accommodation address.

## Luggage Storage

A room for storage of luggage will be made available during the Conference. Please advise Conference Staff members at the registration desk if you wish to store any luggage.

## Taxis

Taxis are readily available from the front entrance to the Convention Centre.

## Parking

The Adelaide Convention Centre's does offer delegate car parking. For further information on the parking facilities please go to [www.adelaidecc.com.au](http://www.adelaidecc.com.au)

The car park is open 24hrs, 7 days a week.

## Name Badges

For security purposes, all attendees must wear their name badge at all times while in the Conference venue. Entrance to the exhibition will be limited to badge-holders only. If you misplace your name badge, please advise staff at the registration desk.

## Delegate List

Information necessary for your attendance at the Conference will be gathered, stored and disseminated in accordance with the nation's privacy legislation.

# GENERAL INFORMATION

The delegate list will be viewable by delegates at the Internet Hub which is located in Exhibition Hall H, stand number 15.

## **Evaluation Surveys**

All delegates will be emailed after the Conference with the online survey link. In order to improve the Conference we kindly request your feedback.

## **Liability/Insurance**

In the event of industrial disruptions or natural disasters the Conference secretariat cannot accept responsibility for any financial or other losses incurred by delegates. Nor can the Secretariat take responsibility for injury or damage to property or persons occurring during the Conference or associated activities. Insurance is the responsibility of the individual delegate.

# VENUE MAPS

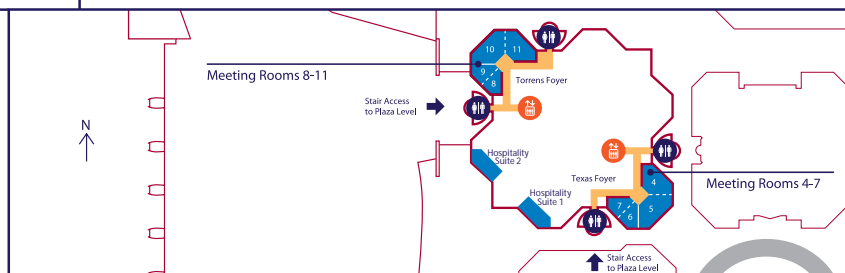
- Circulation areas
- Function areas
- Regattas Bistro

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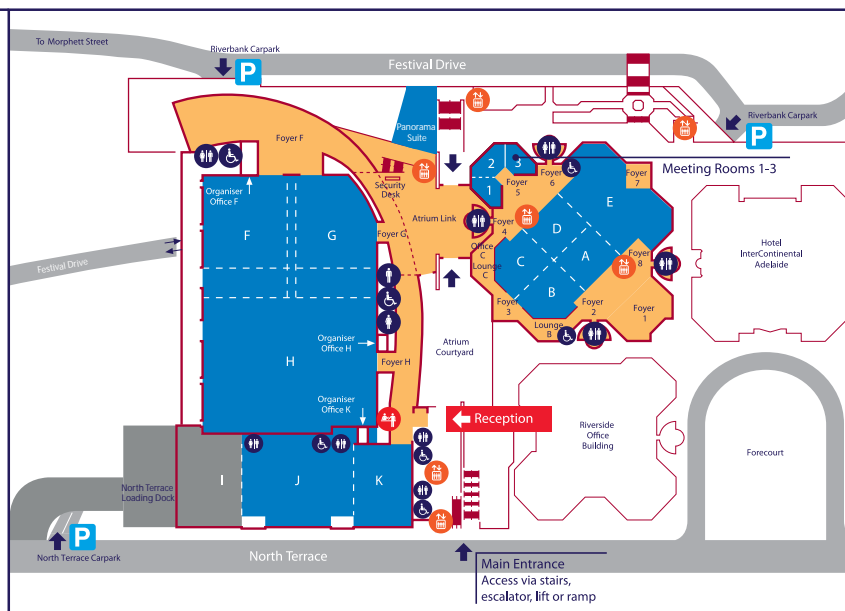


## ADELAIDE CONVENTION CENTRE

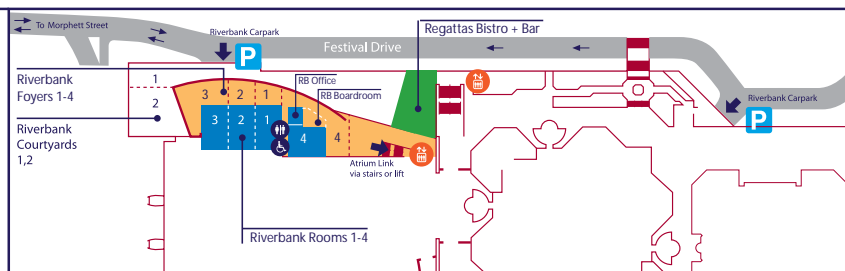
### Level One



### Plaza Level



### Riverbank Level



# ASSOCIATED EVENTS

## Welcome Reception

6.00pm – 8.00pm Sunday 23 November 2014  
Exhibition Hall H, Adelaide Convention Centre

The Organising Committee extends a warm welcome to delegates and guests to attend the Welcome Reception and Exhibition Opening. This function will give delegates an opportunity to meet the speakers of ACIPC 2014, relax with colleagues and network with exhibitors.

## Presidents Breakfast

8.00am – 9.00am Tuesday 24 November 2014  
Exhibition Halls K, Adelaide Convention Centre

This breakfast will be a sit down interactive breakfast to be used as an opportunity to learn more about the various aspects of delegates profession, including education and practice questions. Attendees will be randomly seated at tables hosted by ACIPC President, Mrs Belinda Henderson, representatives of our leadership team and people of your organisation if you wish to take up the package. It is a very popular informal networking opportunity.

## ACIPC Conference Dinner

7.00pm – 11.15pm Tuesday 24 November 2014  
Exhibition Halls J&K, Adelaide Convention Centre

The Conference Dinner will be held at the Adelaide Convention Centre with the theme 'Summer and Fun'. The dinner is inclusive as part of a full Conference registration with tickets available for partners and guests which can be purchased at an additional cost. This social function is an event not to be missed! It will include a three course meal, presentations, entertainment, dancing and much more!

# PRE-CONFERENCE WORKSHOPS

Sunday 23 November 2014

## Workshop 1

Powerful Public Speaking & Presenting: Communicate with Influence and Get Results

### Presenter

Tricia Karp, Powerful Speaking for Powerful Women

### Overview

This workshop will help participants become engaging speakers who can persuade, influence and motivate their audiences. With a focus on structuring presentations as well as speaking skills, participants will learn how to present with presence, confidence, clarity and ease.

## Workshop 2

Effective Implementation of Evidence Based Infection Control Practice

### Presenter

Prof Andrea Marshall, Professor of Acute and Complex Care Nursing, NHMRC TRIP Fellow 2012, Griffith University and The Gold Coast University Hospital

### Overview

This workshop is designed to introduce you to strategies that can assist the effective implementation of evidenced-based practice in infection control. Underpinned by implementation science, we will explore models and frameworks as well as interventions to assist with implementing clinical practice that leads to improved patient outcome

## Workshop 5

Imagery and Infection Prevention: An Under Appreciated Medium

### Presenter

Dr Cathryn Murphy, Executive Director, Infection Control Plus Pty Ltd and Adjunct Professor Griffith University, School of Nursing & Ms Lisa Kurtz, Co-Director, Clinical Captures

# PRE-CONFERENCE WORKSHOPS

Sunday 23 November 2014

## Overview

Infection preventionists (IPs) require new, innovative ways to capture the attention of target audiences. Clever, creative use of photography provides an immediate, easy and practical solution. This session includes discussion of how to capture images that convey important IP messages and record data during outbreaks, audits and routine monitoring.

Please note: Participants are welcome to bring along their phone or digital cameras for image taking simulation exercise.

## Workshop 6

Rising Above Resistance - How to Enhance and Sustain Your Antimicrobial Stewardship Program

## Presenter

Fiona Gotterson<sup>1</sup>, Caroline Marshall<sup>2</sup>, Morgyn Warner<sup>3</sup>, Noleen Bennett<sup>4</sup>, Debbie Carter<sup>1</sup>

1. Australian Commission on Safety and Quality in Health Care
2. The Victorian Infectious Diseases Service, Royal Melbourne Hospital
3. Infectious Diseases Physician and clinical microbiologist, SA Pathology
4. Infection Control Consultant, VICNISS Coordinating Centre

## Overview

This workshop is for the more experienced infection control practitioner (ICP) who has a good knowledge of antimicrobial stewardship, and is seeking to learn more about ways to enhance their existing program and promote further development and sustainability. We will provide an update on the upcoming AMS Clinical Care Standard and other national activity regarding AMS, and discuss implications for the ICP. We will also explore emerging developments around antimicrobial use both overseas and in Australia, and facilitate an interactive case study discussion focusing on the use of data to enhance the effectiveness of the AMS program.

# PRE-CONFERENCE WORKSHOPS

**Sunday 23 November 2014**

## **Workshop 7**

The College, Credentialing and Your Career

### **Presenter**

Professor Ramon Z. Shaban - Acting Head, School of Nursing and Midwifery, Program Director, Griffith Graduate Infection Control Program, Centre for Health Practice Innovation, Griffith Health Institute, School of Nursing and Midwifery, Griffith University

### **Overview**

Credentialling is a self-regulatory process instituted by professions organisations that determines and acknowledges the expertise of individuals. The ACIPC Credential recognises the expertise and excellence of individuals in infection prevention and control. It is an award and recognition of expertise from and by peers.

This interactive and dynamic workshop presents the Australasian College for Infection Prevention and Control Credentialling Program

## **Workshop 8**

Hand Hygiene Promotion in Australia - Success at the Front Line

### **Presenter**












1. Prof Lindsay Grayson, Hand Hygiene Australia
2. Ms Sally Havers, Hand Hygiene Australia
3. Ms Karen Olsen, Hand Hygiene Australia
4. Mrs Kate Ryan, Hand Hygiene Australia
5. Dr Andrew Stewardson, Hand Hygiene Australia

### **Overview**

The facilitators will provide a brief overview of the current status of the National Hand Hygiene Initiative; review quality improvement implementation methods recently applied to hand hygiene and infection control, and present results from a national review to identify common features of successful Australian institutional hand hygiene programs. Selected institutional hand hygiene coordinators will present their programs and participate in a panel discussion with workshop participants. Participants will be invited to perform a gap analysis and develop an action plan for their own program.



# EXHIBITION BOOTH LISTING







Booth Number	Company Name	
1	Haines	
2	Perrigo	
3	Saraya	
4	Gojo	
5	BD	 Helping all people live healthy lives
6		
7	SteriHealth	 Safer Simpler Smarter
8		
9	Hygiene Solutions UK	 Integrated infection control
10	Medicom Australia	 Pride in Protection
11	Carefusion	
12	Meiko	
15	Baxter	

# EXHIBITION BOOTH LISTING

## NOTES

Booth Number	Company Name	
16	IcNet	
17	Pacific Environment	<b>Pacific Environment</b> Limited 
18	Ocean Informatics	
19	Whiteley Medical	<b>Whiteley</b> Medical 
20	Pall	
21	J n J	
24		
22	Ebos	
23	Deb	
25	3M	
28		
26	Amcla Pty Ltd	
27		



# EXHIBITION BOOTH LISTING

Booth Number	Company Name	
29	The Australian Hospital & Healthcare Bulletin	<small>THE AUSTRALIAN</small> <b>HOSPITAL+ HEALTHCARE</b> <small>BULLETIN</small>
30	BBraun	<b>B   BRAUN</b> SHARING EXPERTISE
31		
32	ISS	 <b>ISS</b> FACILITY SERVICES
33	Covidien	 <b>COVIDIEN</b>
36		
34	Thermo Fisher Scientific	<b>ThermoFisher</b> SCIENTIFIC
35	Terumo	 <b>TERUMO®</b>
37	Austmel	 <b>Austmel</b> <small>ESTABLISHED 1974</small>
38	Bioquell	 <b>bioquell</b>
39	Multigate	<small>The Central logo</small> <small>MULTIGATE LOGO STANDARDS</small> <small>Colour: PMS 864, 207, PMS Green 204, Tone: Blue 100-40%, Green 100-40%, Process Colour: 864 = C 100, M 60, K 11, Green = C 100, Y 100.</small>  <b>Multigate®</b>

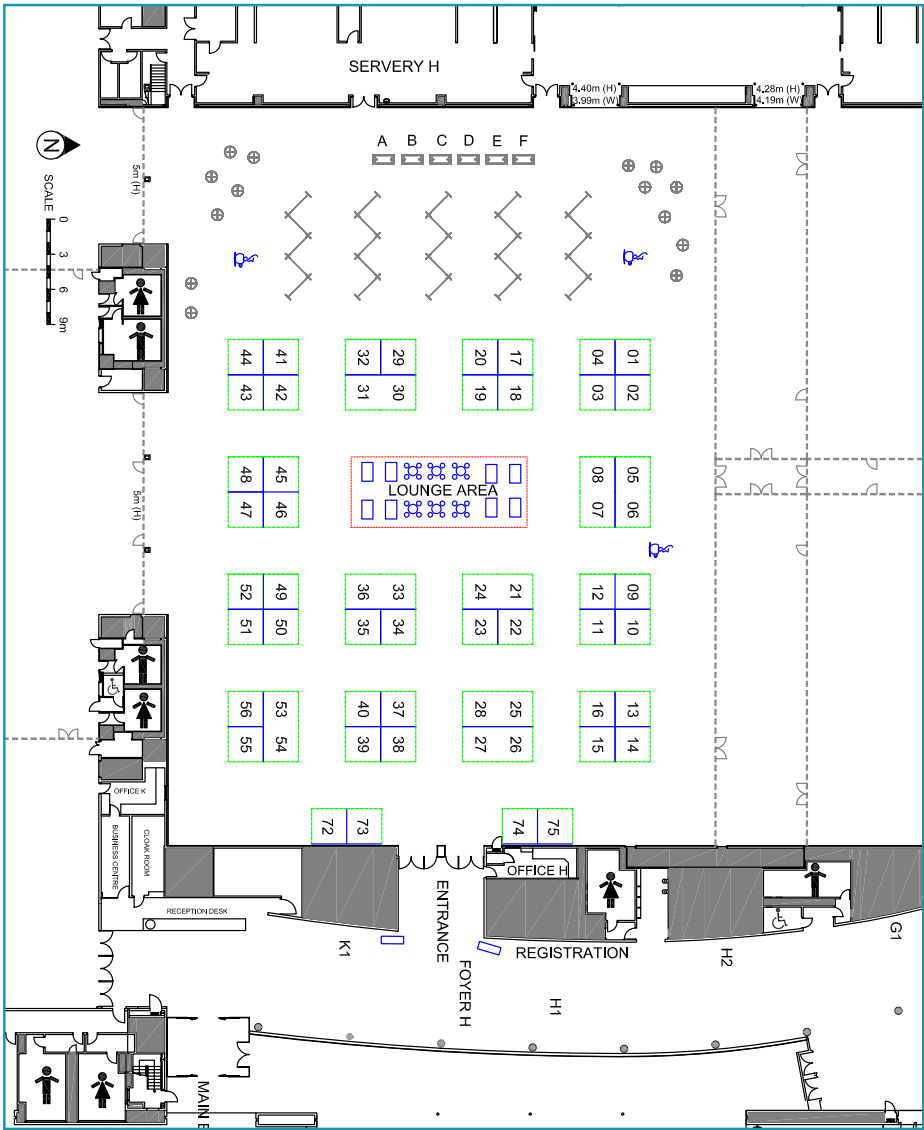
# EXHIBITION BOOTH LISTING

Booth Number	Company Name
40	Marlin 
41	Ego Pharmaceuticals 
42	Mayo Healthcare 
43	Helix Solutions 
44	Nanosonics 
45	RL Solutions  software for safer healthcare
46	Malone Hospital Services 
47	Global Medica 
48	Aaxis Pacific 
49	Defries Industries  
50	Ecolab 

# EXHIBITION BOOTH LISTING

Booth Number	Company Name	
51	Health Quality & Safety Commission NZ	 HEALTH QUALITY & SAFETY COMMISSION NEW ZEALAND <i>Kupu Taurangi Hauora o Aotearoa</i>
52	Rhima	 rhima WASHING EQUIPMENT
53	Cepheid	 Cepheid® <i>A better way.</i>
54		
73	ASHMED	 AshMed
74	SENTRY MEDICAL	 SENTRY MEDICAL
75	SMITHS MEDICAL	 smiths medical bringing technology to life
85	Qiagen	 QIAGEN®

# EXHIBITION FLOORPLAN



# PROFESSIONAL CLUSTER LISTING

Table Number	Organisation Name
1	Australasian College for Infection Prevention and Control (ACIPC)
2	Australian Commission on Safety and Quality in Health Care - ACSQHC
3	Commonwealth Scientific and Industrial Research Organisation (CSIRO)
4	Joanna Briggs Institute

# CONFERENCE PROGRAM

Monday 24 November (Day 1 OF SCIENTIFIC PROGRAM )			
7.30	Registration		
08.30 - 10.00	Opening Ceremony <b>Room Number: Hall C</b>		
08.30 - 08.40	Address by <b>ACIPC President</b>		
08.40 - 09.00	Opening address - <b>Professor Peter Collignon</b>		
09.00 - 09.30	<b>Plenary 1</b> - A framework for reducing inappropriate antibiotic utilization, <b>Room Number: Hall C</b> <b>Diane Jacobsen</b> , MPH CPHQ. Director, Institute for Healthcare Improvement (IHI)		
09.30 - 10.00	<b>Plenary 2</b> - National antibiotic resistance and usage surveillance, <b>Room Number: Hall C</b> <b>Professor John Turnidge</b> , SA Pathology, MBBS (Syd), FRACP, FRCPA, MASM		
10.00 - 10.30	Morning tea <b>Room Number: Hall H</b>		
10.00 - 10.50	Poster session viewing		
10.30 - 12.10 Concurrent sessions	Surveillance and Applied Epidemiology <b>Room Number: Hall C</b>	Infection Control Research/ Knowledge translation <b>Room Number: MR 1 &amp; 2</b>	Infection Control in the Rural hospital setting, Private Practice, Office Based Practice, Dental Practice & Mental Health, Drug and Alcohol Services <b>Room Number: MR 3</b>
10.30 - 10.50	Current Australian Hospital practices in healthcare associated infection surveillance	Building a clinician-academic research group <b>Room Number: MR 1 &amp; 2</b> <b>Professor Claire Rickard RN</b>	Infection prevention and control in the prison setting – challenges and opportunities <b>Room Number: MR 3</b>
	<b>Room Number: Hall C</b> <b>Phil Russo</b> PhD Student School of Public Health & Social Work Institute of Health and Biomedical Innovation Queensland University of Technology	PhD Alliance for Vascular Access Teaching and Research (AVATAR Group)   NHMRC Centre of Research Excellence in Nursing Interventions   Griffith Health Institute Centre for Health Practice Innovation   Royal Brisbane & Women's Hospital   Princess Alexandra Hospital   The Prince Charles Hospital	<b>Cathi Montague RN, MClinNsg, FCENA</b> Nurse Management Facilitator - Clinical Care Systems Co-ordinator SA Prison Health Service Central Adelaide Local Health Network SA Health



10.50 - 11.10	What proportion of healthcare-associated bloodstream infections (HA-BSI) are preventable and what	Translating Healthcare - Associated Infection Prevention Research into Practice Survey <b>Room Number: MR 1 &amp; 2</b>	Cluster Outbreak of Toxic Anterior Segment Syndrome (TASS) in a Day Surgery Performing Ophthalmology Surgical
	does this tell us about the likely impact of financial disincentives on HA-BSI rates? <b>Room Number: Hall C</b> <b>Dr Naomi Runnegar</b> Princess Alexandra Hospital, Brisbane	<b>Professor Mary-Louise McLaws</b> Professor of Epidemiology in Healthcare Infection and Infectious Diseases Control UNSW Medicine, UNSW SYDNEY AUSTRALIA	Procedures <b>Room Number: MR 3</b> <b>Megan Reilly</b> Director Hands-On Infection Control North Perth
11.10 - 11.30	Molecular epidemiology of MRSA and the application of microbial typing for infection control <b>Room Number: Hall C</b> <b>Dr Matthew Sullivan</b> Infectious Diseases Specialist and Clinical Microbiologist Westmead Clinical School Sydney	An optimal infection control model: resources and staffing in Australian hospitals <b>Room Number: MR 1 &amp; 2</b> <b>Dr Bret Mitchell</b> Senior Lecturer, Faculty of Nursing and Health, Avondale College of Higher Education, NSW	Infection Control, Tattooing, Piercing and Fish nibbling <b>Room Number: MR 3</b> <b>Michele Cullen</b> Infection Control Consultant Public Health, Department of Health, Melbourne, Victoria
11.30 - 11.50	Australian CRE guidelines – are we prepared? <b>Room Number: Hall C</b> <b>Glenys Harrington</b> Infection Control Consultancy (ICC) Melbourne, Australia	Enhanced Healthcare Associated Bloodstream Infection Surveillance including assessment of preventability and timely feedback to clinicians: Why we did it. <b>Room Number: MR 1 &amp; 2</b> <b>Dr Naomi Runnegar</b> Princess Alexandra Hospital, Brisbane	How To Establish Yourself As A Private Infection Control Consultant <b>Room Number: MR 3</b> <b>Dr Cathryn Murphy RN MPH PhD CIC</b> Executive Director Infection Control Plus Pty Ltd Adjunct Professor Griffith University, School of Nursing and Midwifery

11.50 - 12.10	<p>An update on the epidemiology of antimicrobial resistance in New Zealand  <b>Room Number: Hall C</b>  <b>Dr Deborah Williamson</b>  Clinical Microbiologist  Institute of Environmental Science and Research Wellington,  NZ Senior Lecturer in Microbiology and Infectious Diseases  University of Otago, Wellington, New Zealand</p>	<p>Enhanced Healthcare Associated Bloodstream Infection Surveillance including assessment of preventability and timely feedback to clinicians: How we did it.  <b>Room Number: MR 1 &amp; 2</b>  <b>Belinda Henderson</b>  Clinical Nurse Consultant  Infection Control Unit  Infection Management Services Princess Alexandra Hospital  Woolloongabba</p>	<p>An exploration of Australian graduating nurses knowledge, intentions and beliefs regarding infection prevention and control  <b>Room Number: MR 3</b>  <b>Fiona Wilson</b>  Clinical Nurse Consultant  Population Health Services  Department of Health &amp; Human Services  Hobart Tasmania</p>
12.10 - 13.15	<p>Lunch  <b>Room Number: Hall H</b></p>		
12.05 - 13.00	Poster session viewing		
13.15 - 13.45	<p>Plenary 3 - Outbreaks and what it means to be "riding to glory on the downhill slope of the epidemic curve"  <b>Room Number: Hall C</b>  <b>Marin L. Schweizer, PhD</b>, Assistant Professor of Internal Medicine -General Internal Medicine, Assistant Professor of Epidemiology University of Iowa, Carver College of Medicine</p>		
13.45 - 15.20 Concurrent sessions	<p>Quality Improvement Initiatives and Advanced Genetic Sequencing to Prevent and Control Infection  <b>Room Number: Hall C</b></p>	<p>Antibiotic Resistance, Outbreaks and Outbreak Management  <b>Room Number: MR 1 &amp; 2</b></p>	<p>Rapid global response to emerging infectious diseases (i.e. Ebola) and Infection Control in Remote &amp; Resource Limited Settings  <b>Room Number: MR 3</b></p>

13.45 - 14.05	<p>Implementat on of impregnated washcloths and 2% chlorhexidine bathing in clinical areas with a focus on reducing the incidence of vancomycin resistant enterococci (VRE) colonisation and surgical site infections</p> <p><b>Room Number: Hall C</b>  <b>Wendy Beckingham</b>  CNC Infect on Prevent on and Control Canberra Hospital ACT</p>	<p>Medical tourism and antibiotic resistance - what are the risks?</p> <p><b>Room Number: MR 1 &amp; 2</b>  <b>A/Prof Geoffrey Playford</b>  Director of Infect on Management Services, Princess Alexandra Hospital, Brisbane.</p>	<p>Partnerships across countries Implement ng hand hygiene program in a resource-poor environment.</p> <p><b>Room Number: MR 3</b>  <b>Co presenters</b>  <b>Tain Gardiner</b>  Clinical Nurse Manager, BN, MPH Infect on Prevent on &amp; Management Unit Top End Health and Hospital Services Rocklands Drive, Casuarina, NT</p> <p><b>Aries Set awat</b>  Infect on Prevent on control Nurse, Sanglah General Hospital "Rumah Sakit Sanglah Denpasar"</p>
14.05 - 14.25	<p>What are the essential elements of a successful quality improvement (QI) project for research and publication?</p> <p><b>Room Number: Hall C</b>  <b>Pauline Bass</b>  Act ng Manager of Infect on Prevent on and Health Care Epidemiology Alfred Health Melbourne</p>	<p>Benefits of Single Patient Rooms – An Infect on Prevent on Perspective</p> <p><b>Room Number: MR 1 &amp; 2</b>  <b>Sue Scott</b>  Coordinator Infect on Control Royal Children's Hospital, Melbourne</p>	<p>GOARN Partners in the field - Ebola outbreak response in West Africa</p> <p><b>Room Number: MR 3</b>  <b>Sharon Salmon</b>  Assistant Director – Infect on Control National University Hospital Singapore</p>
14.25 - 14.45	<p>Antimicrobial use in Tasmanian rural hospitals – a pilot study</p> <p><b>Room Number: Hall C</b>  <b>Fiona Wilson</b></p>	<p>Two different microorganisms causing outbreaks in two different clinical settings</p> <p><b>Room Number: MR 1 &amp; 2</b>  <b>Wendy Beckingham</b></p>	<p>The role of ACIPC in supporting global and national efforts in the control and containment of communicable disease</p> <p><b>Room Number: MR 3</b></p>
	<p>Clinical Nurse Consultant  Populat on Health Services Department of Health &amp; Human Services Hobart Tasmania</p>	<p>CNC Infect on Prevent on and Control Canberra Hospital ACT</p>	<p><b>Claire Boardman</b>  Deputy Director Rheumat c Heart Disease (RHD), Australia Global and Tropical Health Division of Menzies</p>

14.45 - 15.05	Whole genome sequencing for outbreak investigation <b>Room Number: Hall C</b> <b>Dr Matthew Sullivan</b> Infectious Diseases Specialist and Clinical Microbiologist Westmead Clinical School Sydney	The introduction of a risk-based assessment tool to determine ESBL precautions <b>Room Number: MR 1 &amp; 2</b> <b>Ruth Barrat RN, BSc, MAdvPrac (Hons)</b> Clinical Nurse Specialist Infection Prevention and Control Christchurch Hospital Christchurch New Zealand	Antimicrobial stewardship in the New Zealand community <b>Room Number: MR 3</b> <b>Dr Deborah Williamson</b> Clinical Microbiologist Institute of Environmental Science and Research Wellington, NZ Senior Lecturer in Microbiology and Infectious Diseases University of Otago, Wellington, New Zealand
15.05 - 15.20	Afternoon Tea <b>Room Number: Hall H</b>		
14.20 - 15.00	Poster session viewing		
15.20 - 16.50	Free papers		
	Outbreaks/ antimicrobial Stewardship <b>Room Number: Hall C</b>	Research/Public Health policy <b>Room Number: MR 1 &amp; 2</b>	Occupational Health and Safety / Influenza Vaccination/Sharps safety/ Infection Prevention in Community Settings <b>Room Number: MR 3</b>
15.20 - 15.35	Antimicrobial Computerised Decision Support System Reduces Mortality Risk <b>Room Number: Hall C</b> <b>Dr. Angela Chow</b> Senior Consultant Institute of Infectious Diseases & Epidemiology, Tan Tock Seng Hospital Singapore	Improved biofilm killing by utilising combined antimicrobial or antimicrobial instillation with topical negative pressure therapy - an in vitro study <b>Room Number: MR 1 &amp; 2</b> <b>Dr. Shamaila Tahir</b> PhD student Australian School of Advanced Medicine, Macquarie University, NSW, Australia	Monitoring occupational exposures to blood and body fluids across Victorian Hospitals <b>Room Number: MR 3</b> <b>Sandra Johnson</b> Epidemiologist VICNISS Coordinating Centre, Doherty Institute, Melbourne VIC
15.35 - 15.50	A Survey of Infection Control and Antimicrobial Stewardship Practices in Australian Residential Aged Care Facilities	The debate: what is my duty of care? <b>Room Number: MR 1 &amp; 2</b> <b>Dr. Allison Roderick</b> Lecturer	Staff Influenza Vaccine Uptake and Refusal in a Rural Health Service <b>Room Number: MR 3</b> <b>Mr. Lincoln Fowler</b>

	<b>Room Number: Hall C</b> <b>Rhonda L Stuart</b> <b>MBBS, FRACP, PhD.</b> Medical Co-Director, Infect on Prevent on & Epidemiology, Infect ous Diseases Physician, Monash Infect ous Diseases, Monash Health. Adjunct Clinical Associate Professor, Department of Medicine, Monash University	Flinders University	Infect on Prevent on Consultant Bairnsdale Regional Health Service
15.50 - 16.05	Group A Streptococci (GAS) may cause life threatening infect ons Elderly residing in long term care facility (LTCF) are especially at risk. <b>Room Number: Hall C</b> <b>Dr. Mona Schousboe</b> Clinical Director IPC CDHB Medical Microbiologist Canterbury Health Laboratories, Canterbury District Board, NZ	What is the scope of prac tice for infect on control professionals in Australia? Preliminary results from a nat onal survey <b>Room Number: MR 1 &amp; 2</b> <b>Dr. Lisa Hall</b> Senior Research Fellow Queensland University of Technology	Increasing the Performance Target for Victorian Healthcare Worker Inf uenza Vaccinat on Rates: What was the impact? <b>Room Number: MR 3</b> <b>Dr. Noleen Bennet</b> Infect on Control Consultant Victorian Healthcare Associated In fect on Surveillance System (VICNISS) Coordinat ng Centre
16.05 - 16.20	What factors predict a pat ent's receipt of antibiot cs recommended by Computerised Decision Support Systems? <b>Room Number: Hall C</b> <b>Dr. Angela Chow</b> Senior Consultant Institute of Infect ous Diseases & Epidemiology, Tan Tock Seng Hospital Singapore	A cross-sect onal survey of gastrointest nal carriage of and environmental contaminat on with Clostridium dif cile in aged care resident al facilit es <b>Room Number: MR 1 &amp; 2</b> <b>Miss Anita Williams</b> MAE Scholar ANU, UWA	Promot ng and Support ng Infect on Prevent on and Control in Community Set ings A Pract cal Solut on? <b>Room Number: MR 3</b> <b>Ms Linda Henderson</b> Infect on Control Advisor SA Health
16.20 - 16.35	Distribut on of Serotypes & Ant biot c Suscept ibility Pat erns Among Invasive Pneumococcal Diseases in Saudi	Hepat ts A and E virus seroposit vity amongst healthy young adults in India: implicat ons for immunisat on & public health policy	A Sampling of Sharps Safety Device use in UK, USA and Australia - why is Australian usage so low? <b>Room Number: MR 3</b>

	Arabia <b>Room Number: Hall C</b> <b>Prof Mohammed Marie</b> Professor King Saud University	<b>Room Number: MR 1 &amp; 2</b> <b>Prof Atul Kotwal</b> Prof & Head Dept of Community Medicine Army College of Med Sciences	<b>Mr Terry Grimmond</b> Director Grimmond and Associates, Microbiology Consultants
16.50	End of Day One		
17.00 - 18.00	ACIPC AGM <b>Room Number: Hall C</b>		

Tuesday 25 November (Day 2 OF SCIENTIFIC PROGRAM)			
7.30	Registration		
8.00	Breakfast meeting <b>Room Number: Hall K</b>		
09.00 - 09.30	<b>Plenary 4</b> - When do the risks to the patient outweigh the benefits of contact precautions? <b>Room Number: Hall C</b> <b>Marin L. Schweizer, PhD</b> , Assistant Professor of Internal Medicine - General Internal Medicine, Assistant Professor of Epidemiology University of Iowa, Carver College of Medicine		
09.30 - 10.00	<b>Plenary 5</b> - Hospital-acquired infections: How do we reach zero? <b>Room Number: Hall C</b> <b>Diane Jacobsen, MPH</b> CPHQ, Director, Institute for Healthcare Improvement (IHI)		
10.00 - 10.30	Morning tea <b>Room Number: Hall H</b>		
Concurrent sessions 10.30 - 12.10	Cleaning, Disinfection & Sterilization in Healthcare Settings, Construction and Renovation and Eliminating Microorganisms in the Healthcare Environment <b>Room Number: Hall C</b>	Regional "Emerging Hot Topics" and Migrant Health <b>Room Number: MR 1 &amp; 2</b>	Multi-resistant Gram-negative organisms, infection prevention and control challenges in Residential Aged Care, the Community and the Private Sector and Accreditation <b>Room Number: MR 3</b>
10.30 - 10.50	Navigating The "NEW" AS/NZS4187 - how to find what you are looking for <b>Room Number: Hall C</b> <b>Terry McAuley</b> Sterilization & Infection Prevention and Control Consultant STEAM Consulting	VRE - Game of Clones <b>Room Number: MR 1 &amp; 2</b> <b>Dr Andrew Mahony</b> Infectious Diseases & Antimicrobial Stewardship Physician Austin Health Melbourne	Outbreaks in residential care facilities - Lessons learned <b>Room Number: MR 3</b> <b>Megan Reilly</b> Director Hands-On Infection Control North Perth

10.50 - 11.10	Update on the review of The Australasian Health Facility Guidelines (AushFG) – Part D Infect on Prevent on and Control <b>Room Number: Hall C</b> <b>Paul Smollen</b> Project Manager Healthcare Associated Infect ons (HAI) Program Clinical Excellence Commission	Challenges with TB management in the Northern Adelaide Local Health Network <b>Room Number: MR 1 &amp; 2</b> <b>Kellie Byron-Gray RN, ICU Cert, GDPH</b> Clinical Services Coordinator, Infect on Control Infect on Prevent on and Control Service Lyell McEwin Hospital Elizabeth Vale, SA	South Australian surveillance of mult resistant Gram-negat ve infect ons – analysis of trends and implicat ons for infect on control. <b>Room Number: MR 3</b> <b>Irene Wilkinson</b> Manager, Infect on Control Service Communicable Disease Control Branch SA Department of Health Adelaide, SA
11.10 - 11.30	Cleaning, Disinfect on & Sterilizat on in HC set ings and eliminat ng micro organisms in the environment – Water? <b>Room Number: Hall C</b> <b>Belinda Henderson</b> Clinical Nurse Consultant Infect on Control Unit Infect on Management Services Princess Alexandra Hospital Woolloongabba	Screening and other non infect ous issues in new migrants to Australia <b>Room Number: MR 1 &amp; 2</b> <b>Dr Jill Benson AM</b> Senior Medical Of cer, Migrant Health Service, Adelaide Director, Health in Human Diversity Unit, Discipline of General Pract ce, University of Adelaide.	Ant biot c stewardship in the private healthcare set  ng <b>Room Number: MR 3</b> <b>Associate Professor Caroline Marshall</b> Department of Medicine, University of Melbourne The Victorian Infect ous Diseases Service Royal Melbourne Hospital At the Peter Doherty Inst tute for Infect on and Immunity Victoria
11.30 - 11.50	Controlling methicillin resistant Staphylococcus aureus (MRSA) in a hospital and the role of hydrogen peroxide decontaminat on <b>Room Number: Hall C</b> <b>Dr Bret Mitchell</b> Senior Lecturer, Faculty of Nursing and Health, Avondale College of Higher Educat on, NSW	CA-MRSA in and from Aboriginal populat ons <b>Room Number: MR 1 &amp; 2</b> <b>Dr Steven Tong</b> Senior Research Fellow Menzies School of Health Research Infect ous Diseases Physician Royal Darwin Hospital	Surveyor feedback following accreditat on ut lising the Nat onal Safety and Quality Health Service (NSQHS) Standards, Standard 3 - Prevent ng and Controlling Healthcare Associated Infect ons. <b>Room Number: MR 3</b> <b>Sue Greig</b> Senior Project Of cer Nat onal HAI Prevent on Program Australian Commission on Safety and Quality in Health Care
11.50 – 12.10	Infect on prevent on and control in endoscopy – t me to get it right? <b>Room Number: Hall C</b> <b>Terry McAuley</b> Sterilisat on & Infect on Prevent on	Bad design, bad pract ces & bad bugs <b>Room Number: MR 1 &amp; 2</b> <b>Sharon Salmon</b> Assistant Director – Infect on Control Nat onal University Hospital Singapore	Clinical applicat ons of infect on prevent on and control in resident al aged care – Educat onal challenges <b>Room Number: MR 3</b> <b>Susan Jain</b> Clinical Nurse Consultant,

	and Control Consultant STEAM Consulting		Centre for Hospital Epidemiology and Staff Services (CHESS) Prince of Wales Hospital, Randwick
12.10 - 13.15	Lunch <b>Room Number: Hall H</b>		
13.15 - 14.15	<b>Plenary 6</b> - Joint ACIPC & ACSQHC plenary session - Prevention is the new standard. Your vision. Our future. How can we make the most of it? <b>Room Number: Hall C</b> <b>Dr Marilyn Cruickshank</b> , Australian Commission on Safety and Quality in Health Care ACIPC Executive Council Committee Chairs <ul style="list-style-type: none"> <li>• <b>Marija Juraja</b>, Past President, Update on ACIPC Education</li> <li>• <b>Ms Annie Wells</b>, Chair, Special Interest Group</li> <li>• <b>Mr Michael Wishart</b>, Co-Chair, Membership Committee</li> <li>• <b>Phil Russo</b>, Chair, Research Committee</li> </ul>		
Concurrent sessions 14.15 - 15.30	Surgical Site Infections <b>Room Number: Hall C</b>	Infection Control Issues in Neonatal and Pediatric settings <b>Room Number: MR 1 &amp; 2</b>	The ICU and device related infections and emerging infections with infection on control implications <b>Room Number: MR 3</b>
14.15 - 14.35	Reducing joint SSIs - An update on the IHI Project Joints <b>Room Number: Hall C</b> <b>Diane Jacobsen, MPH CPHQ</b> , Director, Institute for Healthcare Improvement (IHI)	Managing outbreaks in the neonatal and Pediatric setting. <b>Room Number: MR 1 &amp; 2</b> <b>Rhonda L Stuart MBBS, FRACP, PhD</b> , Medical Co-Director, Infection Prevention & Epidemiology, Infectious Diseases Physician, Monash Infectious Diseases, Monash Health. Adjunct Clinical Associate Professor, Department of Medicine, Monash University	The NSW Sepsis Kills Program <b>Room Number: MR 3</b> <b>Tony Burrell</b> , Clinical Adviser, Clinical Excellence Commission, NSW
14.35 - 14.55	Interventions to reduce surgical site infections following caesarean section <b>Room Number: Hall C</b> <b>Tain Gardiner BN MPH CNC</b>   Infection Control QEII Jubilee Hospital   Metro South Health Coopers Plains, QLD	Pandemic Influenza: Opportunity To Improve Patient Management <b>Room Number: MR 1 &amp; 2</b> <b>Sue Scott</b> , Coordinator Infection Control Royal Children's Hospital, Melbourne	Emerging viral threats - An update on MERS CoV and implications for infection control <b>Room Number: MR 3</b> <b>A/Prof Geoffrey Playford</b> , Director of Infection Management Services, Princess Alexandra Hospital, Brisbane.
14.55 - 15.15	The high and low tides of SSI <b>Room Number: Hall C</b> <b>Co presenters</b>	CMV in the NICU <b>Room Number: MR 1 &amp; 2</b> <b>Dr Celia Cooper</b> , Site Clinical Director and	Infections in intra-vascular devices: risk factors and interventions <b>Room Number: MR 3</b>



	<p><b>Vanessa Goodhand</b> Clinical Practice Consultant Infectious Disease Prevention and Control Unit The Queen Elizabeth Hospital</p> <p><b>Helen Lorenz</b> - Associate Clinical Services Coordinator (ACSC) Infectious Disease Prevention and Control Unit The Queen Elizabeth Hospital</p>	<p>Head of Microbiology &amp; Infectious Diseases Women's and Children's Hospital South Australia</p>	<p><b>Sharon Salmon</b> Assistant Director – Infectious Disease Control</p> <p>National University Hospital Singapore</p>
15.15 - 15.30	Afternoon Tea		
15.30 - 15.50	<p><b>Plenary 7 – Strategies to Prevent and Treat S. aureus Infections: Decolonisation in High-Risk Patient Populations and Targeted Antibiotic Use</b></p> <p><b>Room Number: Hall C</b></p> <p><b>Marin L. Schweizer, PhD</b>, Assistant Professor of Internal Medicine -General Internal Medicine, Assistant Professor of Epidemiology University of Iowa, Carver College of Medicine</p>		
15.50 - 17.10 Concurrent sessions	<p>Controlling problem microorganisms – Clostridium difficile, MRSA, VRE &amp; CRE</p> <p><b>Room Number: Hall C</b></p>	<p>Understanding behavior in order to implement change / Education / Professional Development / Public Health</p> <p><b>Room Number: MR 1 &amp; 2</b></p>	<p>Hand hygiene, Aseptic Technique &amp; Infection Prevention for the Healthcare Worker and The Suspected Creutzfeldt-Jacob Patient</p> <p><b>Room Number: MR 3</b></p>
15.50 - 16.10	<p>Nurses and antimicrobial prescribing: embedding antibiotic stewardship in everyday practice</p> <p><b>Room Number: Hall C</b></p> <p><b>Dr Morgyn Warner</b> Clinical Microbiologist &amp; ID Physician SA Pathology (RAH &amp; TQEH sites) Adelaide</p>	<p>Can we use social media to influence Infection Prevention Practice?</p> <p><b>Room Number: MR 1 &amp; 2</b></p> <p><b>Pauline Bass</b> Acting Manager of Infectious Disease and Health Care Epidemiology Alfred Health Melbourne</p>	<p>Healthcare workers with Cystic Fibrosis – Infection Control Guidelines</p> <p><b>Room Number: MR 3</b></p> <p><b>Rhonda L Stuart MBBS, FRACP, PhD.</b> Medical Co-Director, Infectious Disease &amp; Epidemiology, Infectious Diseases Physician, Monash Infectious Diseases, Monash Health. Adjunct Clinical Associate Professor, Department of Medicine, Monash University</p>
16.10 - 16.30	<p>Preventing cross infection through novel multi-bed ward design</p> <p><b>Room Number: Hall C</b></p> <p><b>Ruth Barrat RN, BSc, MAdvPrac (Hons)</b> Clinical Nurse Specialist Infectious Disease Prevention and Control</p>	<p>Credentialed and Competency: Future Considerations for Australasian Infection Control Professionals</p> <p><b>Room Number: MR 1 &amp; 2</b></p> <p><b>Professor Ramon Z. Shaban</b> Deputy Head of School (Learning and Teaching)</p>	<p>A Doctor's Experience From The Other Side Of The Bed - The Importance of Hand Hygiene " Glen's Story"</p> <p><b>Room Number: MR 3</b></p> <p><b>Dr Glen Guerra</b> General Surgery Registrar St Vincent's Health</p>

	Christchurch Hospital Christchurch New Zealand	and Chair, Assessment Board Chair, Infect on Control and Infect ous Diseases Grif th Graduate Infect on Control Program Director Centre for Health Pract ce Innovat on, Grif th Health Inst tute School of Nursing and Midwifery, Grif th University	
16.30 - 16.50	Clostridium Dif ile – Infect on control challenges now and in the future” <b>Room Number: Hall C, Rhonda L Stuart MBBS, FRACP, PhD.</b> Medical Co-Director, Infect on Prevent on & Epidemiology, Infect ous Diseases Physician, Monash Infect ous Diseases, Monash Health. Adjunct Clinical Associate Professor, Department of Medicine, Monash University	The top 3 infect on control init at ves that can be enhanced by partnering with consumers <b>Room Number: MR 1 &amp; 2 Mary Potter</b> Consumer Representat ve Australasian College for Infect on Prevent on and Control (ACIPC)	Healthcare Workers Compliance Towards Wearing Personal Protect ve Equipments When Caring for Pat ents Infected or Colonised With Mult drug Resistant Organisms in Healthcare Set ings <b>Room Number: MR 3 Susan Jain</b> Clinical Nurse Consultant, Centre for Hospital Epidemiology and Staf Services (CHESS) Prince of Wales Hospital, Randwick
16.50 - 17.10	A genomic framework to understanding transmission of Clostridium dif ile, MRSA, VRE & CRE <b>Room Number: Hall C Dr Steven Tong,</b> Senior Research Fellow Men-zies School of Health Research Infect ous Diseases Physician Royal Darwin Hospital	Understanding behaviour in order to implement change <b>Room Number: MR 1 &amp; 2 Professor Mary-Louise McLaws</b> Professor of Epidemiology in Healthcare Infect on and Infect ous Diseases Control UNSW Medicine, UNSW SYDNEY AUSTRALIA	“The Suspected Creutzfeldt-Jacob (CJD) Pat ent” <b>Room Number: MR 3 Michele Cullen</b> Infect on Control Consultant Public Health, Department of Health, Melbourne, Victoria
17.10	End of Day Two		
19.00	Conference Dinner <b>Room Number: Hall K (arrival) ,Hall J (dinner)</b>		

Wednesday 26 November (Day 3 OF SCIENTIFIC PROGRAM)			
07.30	Registrar on		
09.00 - 09.30	<b>Plenary 8</b> - The importance of executive management support in implementation science and healthcare improvement <b>Room Number: Hall C</b> <b>Diane Jacobsen, MPH CPHQ</b> , Director, Institute for Healthcare Improvement (IHI)		
09.30 - 10.00	<b>Plenary 9</b> - PHD STUDENTS AND POSTDOCTORAL FELLOWS presentations x 4 <b>Room Number: Hall C</b> Topic: Optimal infection prevention strategies for caesarean section <b>Invited Speaker: Mrs Elizabeth Martin</b> -- Institute of Health and Biomedical Innovation Queensland University of Technology Topic: Preventing infections through cleaner hospitals (PITCH): An environmental cleaning bundle <b>Invited Speaker: Ms. Michelle Allen</b> -- Institute of Health and Biomedical Innovation Queensland University of Technology Topic: The Economics of Controlling Clostridium difficile <b>Invited Speaker: Mr David Brain</b> -- Institute of Health and Biomedical Innovation Queensland University of Technology Topic: Antimicrobial Stewardship: an economic evaluation <b>Invited Speaker: Mrs Sonali Coulter</b> -- Institute of Health and Biomedical Innovation Queensland University of Technology		
10.30 - 11.00	Morning tea <b>Room Number: Hall H</b>		
11.00 - 12.30	Free papers		
	Quality Improvement/ Accreditation/Public Policy/Aged Care and the Non-acute Sector <b>Room Number: Hall C</b>	Surveillance <b>Room Number: MR 1 &amp; 2</b>	Education and Training/ Construction and Renovation <b>Room Number: MR 3</b>
11.00 - 11.15	"Two draft policies and four months until the first patients arrive". How Standard 3 - Preventing and Controlling Healthcare Associated Infections was used as the framework to develop an Infection and Control Plan at a "Greenfields Hospital" <b>Room Number: Hall C</b> <b>Ms Catherine Macknight</b> Infection Control Consultant - Project Chris O'Brein Lifehouse	"Our patients are different": Patient case mix and other risk factors for surgical site infections across Victorian public and private hospitals <b>Room Number: MR 1 &amp; 2</b> <b>Sandra Johnson</b> Epidemiologist VICNISS Coordinating Centre, Doherty Institute, Melbourne VIC	Glamour versus effective hand hygiene: incentives to improve effective hand hygiene practices in maternity wards <b>Room Number: MR 3</b> <b>Ms Lorraine Hurrell</b> Infection Prevention and Control Clinical Nurse Women's and Children's Health Network

11.15 - 11.30	<p>The New Zealand Health Quality &amp; Safety Commission surgical site infection on improvement programme</p> <p><b>Room Number: Hall C</b>  <b>Dr Deborah Jowit</b>  Senior Advisor  NZ Health Quality &amp; Safety Commission</p>	<p>Compliance of arthroplasty surgeon protocols for preventing surgical site infection with Australian guidelines</p> <p><b>Room Number: MR 1 &amp; 2</b>  <b>Dr. Justine Naylor</b>  Senior Principal Research Fellow Whitlam Orthopaedic Research Centre, SWSLHD: UNSW; Ingham Institute of Applied Medical Research</p>	<p>No time for losers: producing infection control champions in the healthcare setting</p> <p><b>Room Number: MR 3</b>  <b>Ms Lynne Brown</b>  Lecturer School of Nursing and Midwifery, Griffith University</p>
11.30 - 11.45	<p>Healthcare Mergers: infection prevention and control in a diverse healthcare institution</p> <p><b>Room Number: Hall C</b>  <b>Mr. Noel Supsup</b>  Practitioner, Infection Prevention And Control 1 University Health Network Toronto Canada</p>	<p>Educating the healthcare professional is the key to reducing catheter related bloodstream infections</p> <p><b>Room Number: MR 1 &amp; 2</b>  <b>Dr Kieron Gorman</b>  Consultant Intensivist Intensive Care Unit, The Royal Melbourne Hospital, Melbourne Health</p>	<p>Implementing Aseptic Technique 'train the trainer' model across the Northern Adelaide Local Health Network</p> <p><b>Room Number: MR 3</b>  <b>Ms Kellie Byron-Gray</b>  Clinical Services Coordinator  Lyell McEwin Hospital Elizabeth Vale, SA</p>
11.45 - 12.00	<p>Neither Guest Houses nor Cafes - Perspectives on Infection Control in Aged Care, General Practice - The Non-acute Sector</p> <p><b>Room Number: Hall C</b>  <b>Margaret Jennings</b>  Marjien Education Service</p>	<p>Antimicrobial resistance among urinary tract infection isolates of Escherichia coli in an Australian population based sample</p> <p><b>Room Number: MR 1 &amp; 2</b>  <b>Ms Oyebola Fasugba</b>  MPhil candidate; Research Associate School of Nursing, Midwifery and Paramedicine, Australian Catholic University</p>	<p>Cricket bats and containment: Can zombie pop culture be used to improve infection prevention and control practices?</p> <p><b>Room Number: MR 3</b>  <b>Mr Mat Mason RN, CICP, BNSci, M Rural Health, M Advanced Practice (IC)</b>  Lecturer School of Nursing and Midwifery University of the Sunshine Coast</p>
12.00 - 12.15	<p>Training your workforce to prevent healthcare associated infections - one size does not fit all</p> <p><b>Room Number: Hall C</b>  <b>Sue Borrell</b>  Infection Prevention and Healthcare Epidemiology, Alfred Health, Melbourne</p>	<p>Reporting on a proof of concept plan for national online surveillance of healthcare associated urinary tract infections</p> <p><b>Room Number: MR 1 &amp; 2</b>  <b>Prof Anne Gardner</b>, Professor of Nursing School of Nursing, Midwifery and Paramedicine, Australian Catholic University</p>	<p>Best practice infection management during hospital refurbishment projects: Co-presenters</p> <p><b>Room Number: MR 3</b>  <b>Mr Chaim Kolominskas</b>  Business Development Manager  - Technologies Pacific Environment  <b>Kathy Taylor</b> : Infection Control Manager, Wesley Private Hospital, Brisbane</p>

12.30 - 13.15	Lunch <b>Room Number: Hall C</b>
13.15 - 13.45	<b>Plenary 10</b> - Evidence base for interventions to improve hand hygiene and the pros and cons of automated hand hygiene systems <b>Room Number: Hall C</b> <b>Marin L. Schweizer, PhD</b> , Assistant Professor of Internal Medicine -General Internal Medicine, Assistant Professor of Epidemiology University of Iowa, Carver College of Medicine
13.45 - 14.15	HYPOTHETICAL - Ebola in Liberia, Sierra Leone, Guinea and Nigeria and now at St Elsewhere, in a large regional hospital in Australia! <b>Room Number: Hall C</b> <ul style="list-style-type: none"> <li>• TBA - Infect on Prevention and Control Practitioners/Consultant Representatives</li> <li>• <b>Dr Caroline Marshall</b> - Associate Professor Caroline Marshall, Department of Medicine, University of Melbourne. The Victorian Infectious Diseases Service Royal Melbourne Hospital at the Peter Doherty Institute for Infection and Immunity Victoria</li> <li>• <b>Marin L. Schweizer, PhD</b> - Assistant Professor of Internal Medicine -General Internal Medicine, Assistant Professor of Epidemiology University of Iowa, Carver College of Medicine</li> <li>• <b>Sharon Salmon</b> - Assistant Director – Infection Control National University Hospital Singapore</li> <li>• Representative – Victorian VICNISS Healthcare Associated Infection Surveillance System Facilitator</li> <li>• <b>Marija Juraja</b>, Past President, ACIPC</li> </ul>
14.15 - 14.30	End of Day Three and Close of Conference

# **ORAL ABSTRACTS DAY ONE MONDAY 24 NOVEMBER 2014**

# A framework for reducing inappropriate antibiotic utilization

## Author

Jacobsen D



## Abstract

The inappropriate use of antibiotics in hospitals needlessly increases the cost of care, promotes antibiotic resistance, and increases the risk of infections such as Clostridium difficile (C. diff). The Centers for Disease Control and Prevention (CDC) recently reported that at least 50% of antibiotic use in US hospitals is inappropriate with considerable room for reducing waste, improving patient safety, and preventing the emergence of multiple drug-resistant organisms. The Infectious Diseases Society of America has issued comprehensive guidelines for enhancing antibiotic stewardship, however, implementation of these guidelines by US hospitals has been slow and incomplete primarily due to the complexity and number of guidelines and their resource intensity. In 2013, the CDC released Core Elements for the

CDC and IHI partnered to develop a framework for reducing inappropriate antibiotic utilization, with an emphasis on practicality and ease of implementation in the inpatient setting. These recommendations were designed to support hospitals regardless of size, acuity, and geographic location in their efforts to improve patient care and decrease costs related to antibiotic utilization.

Initial prototyping and pilot testing across hospitals demonstrated the effectiveness of incorporating stewardship into the process of care, with interventions designed in such a way as to be part of the normal workflow of hospitalists.

Specific interventions that were demonstrated to be particularly successful in hospitals include:

- An “antibiotic time out” — a pause at 48 to 72 hours to review the indication and expected duration of antimicrobial therapy, and make appropriate adjustments or discontinue treatment based on available clinical data; and
- Use of multidisciplinary rounds to engage all team members in antibiotic stewardship goals, opportunities for improvement, and action.

In 2013, the CDC released Core Elements of Hospital Antibiotic Stewardship in the ongoing efforts to optimize the treatment of infections and reduce adverse events associated with antibiotic use.

# National antibiotic resistance and usage surveillance

## Author

Turnidge J

## Abstract



Surveillance is the cornerstone of attempts to control the emergence, amplification and spread of antimicrobial resistance. Without firm knowledge of usage volumes and usage patterns, it is not possible to know the extent of the 'antibiotic burden' and the selection pressure that it exerts. And without an understanding of resistance rates and the way they change over time, it is not possible to know how big the problems are. Because resistance evolves over time, even if the selection pressure does not change, and because we need to measure any effects of interventions to control resistance, it is necessary to have ongoing surveillance.

Recommendations to establish national resistance and usage surveillance in Australia go back almost 15 years, but the momentum of action on emerging resistance was lost during the 2000's. Antimicrobial resistance (AMR) is now back in the international spotlight and Australia has re-kindled its efforts to tackle this issue nationally. As one of the first initiatives, funding to establish surveillance of AMR and antimicrobial usage program for Australia has been found. Over financial years 2013-16, the Australian Commission on Safety and Quality in Health Care has been charged with the responsibility of establishing a national program for human health – the AURA Project. It is planned that a similar complementary program will also be developed in the veterinary/agricultural sector, and that both programs will eventually merge under a One Health banner.

The types of data for a national human surveillance program fall into 8 categories, defined by the need for usage and resistance surveillance, in hospitals and the community, capturing data passively, and generating targeted additional data on priority organisms. Australia already has some working programs in seven of these eight categories, some of which are effectively fit for purpose, and merely require scaling up or modification. One significant gap is the lack of a national system for tapping into laboratory information systems for resistance data. This has the great benefit of automatically collecting and collating data being generated daily in the public and private sectors. This is being tackled through a pilot program that will be joining a small number of interstate laboratories to an already established state system. Similarly it is hoped that data from hospital pharmacy systems will be captured in similar fashion.

Ultimately, AMR and usage surveillance data are data for action. The established surveillance program should provide the necessary guideline as to where interventions should be directed.



# Current Australian Hospital practices in healthcare associated infection surveillance.



**Author**  
Russo P

## **Abstract**

Healthcare associated infection (HAI) surveillance programs are critical for infection prevention. Australia does not have a comprehensive national HAI surveillance program. Evidence from international programs demonstrates national HAI surveillance reduces the incidence of HAIs. However, the current status of HAI surveillance activity in Australian States is disparate, variation between programs is not well understood, and the quality of data currently used to compose national HAI rates is uncertain.

Data from a study exploring HAI surveillance practices and agreement level in identifying HAIs will be presented.

## What proportion of Healthcare-Associated Bloodstream Infections (HA-BSI) are preventable and what does this tell us about the likely impact of financial disincentives on HA-BSI rates?



### Author

Runnegar N

### Abstract

Healthcare-associated bloodstream infection (HA-BSI) rates are relatively easy to measure and have therefore have been used for not only surveillance, but also key performance indicator setting, benchmarking and more recently to determine financial disincentives. The potential conflicts of using BSI surveillance data for these other purposes will be discussed. The approach to financial disincentives aimed at reducing HA-BSI in the United States and Queensland will be compared and contrasted. Data on preventable contributors to HA-BSI prospectively collected over the last three years at the Princess Alexandra Hospital will be presented and discussed with reference to the potential for financial disincentives to impact on overall HA-BSI rates.

# Molecular epidemiology of MRSA and the application of microbial typing for infection control.



**Author**  
O'Sullivan M

## Abstract

Microbial typing allocates isolates to different groups within a species. It may be done for several reasons – to identify isolates that belong to a group of increased virulence, to study the emergence and spread of new clones on a global scale, or to identify person-to-person transmission on a local level. Traditionally strain typing in infection control has been performed in a retrospective manner, to confirm suspected outbreaks long after they have occurred. Increasingly, new, rapid, inexpensive and high throughput typing methods have allowed typing to be performed prospectively to identify transmission events soon after they occur, which allows for more timely infection control interventions. Such an approach is particularly effective in situations of high endemicity, as is the case for MRSA in many hospitals, where clusters of cases may not be discernible without strain typing. One method of MRSA typing suitable for this purpose is binary typing using multiplex PCR/reverse line blot assay. This method has been used routinely for 3 years at two large hospitals in Western Sydney and has identified 400 different strain types in over 3500 isolates. The application of this method in identifying MRSA transmission events will be discussed.

# Australian CRE guidelines – are we prepared?



**Author**  
Harrington G

## Abstract

Australia as with other countries has published guidelines in relation to managing carbapenem resistant Enterobacteriaceae (CRE). The Australian "Recommendations for the control of Multi-drug resistant Gram-negatives: carbapenem resistant Enterobacteriaceae" were finalised in November 2013 and have been readily available on the Australian Commission on Safety and Quality in Health Care (ACSQHC) web page. Strategies include reducing community and individual risk from CRE, detection and surveillance for CRE, additional control measures to reduce cross transmission and information relating to laboratory screening methods.

Carbapenem resistance in Enterobacteriaceae occurs mostly from the production of enzymes (carbapenemases) which inactivate these antibiotics. Some strains of CRE have been shown to rapidly disseminate in health care settings. Carbapenem resistant Enterobacteriaceae (CRE) are associated with high mortality rates and in addition to carbapenem resistance often carry genes that can present a high level of resistance to other antimicrobials, leaving clinicians with limited options in terms of treatment.

In the United States, carbapenemase-producing *Klebsiella pneumoniae* were first reported in 1996, following which it spread across the country. In Europe most countries have reported cases of CRE and in Greece and Italy CRE are now endemic in many hospitals. A recent report on the percentage of invasive isolates of carbapenem-resistant *Klebsiella pneumoniae* from 21 hospital laboratories across Italy noted the dramatic increase in CRE from lower than 2% in 2009, to 15% in 2010, and 35% in 2013. In addition the report noted the increasing incidence of colistin resistance superimposed on carbapenem-resistant *Klebsiella pneumoniae*. Patients with this resistance were not only found in ICU but also in the wards.

Resources to control endemic CRE are substantial. The implementation, testing, training and credentialing in strategies to identify and manage cases of CRE which are imported or arise in Australia are crucial in controlling the spread of CRE.

# An update on the epidemiology of antimicrobial resistance in New Zealand.



## Author

Williamson D

## Abstract

Antimicrobial resistance is one of the biggest health threats of the modern age, threatening the routine treatment of many common infectious diseases. Resistance to many common antimicrobials is now endemic in New Zealand, in both community and healthcare settings. Over the past two decades, the landscape of antimicrobial resistance has changed considerably in New Zealand, with the emergence and spread of pathogens such as community-associated methicillin-resistant *Staphylococcus aureus*, ESBL-producing Enterobacteriaceae and multiresistant *Neisseria gonorrhoeae*. Factors contributing to the emergence and spread of antimicrobial resistant pathogens in New Zealand include the use and overuse of antimicrobials, transmission of resistant organisms in community and healthcare settings, and importation of resistant pathogens from areas where multiresistant bacteria are endemic. This talk will provide an overview of major antimicrobial-resistant bacteria in New Zealand, with a specific focus on those pathogens that pose threats to human health.

# Building a clinician-academic research group

## Author

Rickard CM<sup>1,2</sup>



1 Alliance for Vascular Access Teaching and Research (AVATAR) Group, NHMRC Centre of Research Excellence in Nursing Interventions for Hospitalised Patients, Griffith Health Institute Centre for Health Practice Innovation, Brisbane.

2 Visiting Scholar, The Royal Brisbane & Women's Hospital, The Princess Alexandra Hospital, & The Prince Charles Hospital, Brisbane.

## Introduction

We have not yet succeeded in abolishing healthcare acquired infections. To do so requires constant evaluation of new and existing practices to see if the strategies we think “work”, actually do. In other words, we need to do research, and to do it well. But how do we achieve this when neither hospitals nor universities have permanent research budgets for infection prevention research?

## Objectives

To suggest strategies for developing successful clinical-academic research partnerships for infection prevention research.

## Methods

To discuss practical strategies for research collaboration using the development of the Alliance for Vascular Access Teaching & Research (AVATAR) Group as a practical example ([avatargroup.org.au](http://avatargroup.org.au)). Based at Griffith University, AVATAR is a multi-disciplinary research group of more than 100 clinical and academic researchers from nursing, and medical backgrounds as well as scientists, economists, and bioengineers.

## Results

The Group's track record in systematic reviews, multi-centre randomised controlled trials, laboratory and clinical feasibility testing, and opportunities for mentoring between junior and experienced researchers, has culminated in \$6 million in NHMRC funding, prestigious publications in venues such as The Lancet, and opportunities to bridge the evidence-implementation gap while working towards eliminating vascular access catheter-related infections.

## Conclusions

When researching complex problems, such as intravascular access device management, the strengths of many are required to find, develop and evaluate successful infection prevention solutions.

## Translating Healthcare-Associated Infection Prevention Research into Practice Survey.



### Author

McLaws M

### Abstract

The healthcare systems in Australia and New Zealand (ANZ) are closely aligned yet we do not have a formal description of the adoption and implementation of key practices in the field of patient safety and healthcare associated infection prevention across both countries. To explore how Healthcare Infection Control Practices Advisory Committee (HICPAC) influences our infection control practices we have the opportunity to collaborate with our USA colleagues. Our three-country collaboration will provide a comprehensive map of common infection prevention activities and practices. Our collaborative team managing the survey are Glenys Harrington and Cathryn Murphy from Australia, Jane Barnett and Ruth Barratt from New Zealand and Sanjay Saint and Todd Greene from the USA. We will launch our collaborative project at ACPIC with a presentation of the survey background, content and methodology.

# An optimal infection control model: resources and staffing in Australian hospitals.

**Author**  
Mitchell B



## Background

Three decades ago, the landmark SENIC study demonstrated efficacy of infection prevention and control (IPC) activities in hospitals, including surveillance and infection control staffing. Since that time, a nominal figure of one infection control professional (ICP) per 250 beds has been broadly used to guide staffing. Much has changed in IPC, including the scope of practice ICPs and new and emerging challenges. In Australia, there is limited data on the structure of hospital based IPC units. In this presentation, we describe findings from phase two of a three phase study. The aim of this phase was to explore staffing levels of infection control units in Australian hospitals; outputs and patient outcomes; and describe costs associated with the provision of IPC programs in Australian hospitals.

## Methods

A cross sectional study design was used. Participants completed an online web-based anonymous survey. The participants in this study were infection control units in Australian public and private hospitals. Data collected included details about the respondent; hospital demographics; details and services of the infection control unit; barriers and enablers; and a description of IPC related outputs and patient outcomes.

## Results

Forty-nine surveys were undertaken, accounting for 152 Australian hospitals, constituting 22.4% of all public and privately funded hospital beds. Sixty seven percent of responses were from publicly funded hospitals. The mean number of ICPs in Australian hospitals was 0.66 per 100 overnight beds (95% CI 0.55-.0.77). There was relative consistency in the mean ICPs per 100 beds across different size hospitals. Privately funded hospitals have significantly less ICPs per 100 overnight beds, compared to publicly funded hospitals ( $P<0.01$ ). Infection control units that were led by a credentialed ICP had higher staffing ratios, compared to units without ( $p<0.01$ ). Further results will be outlined during the presentation.

## Conclusion

The findings of this study will assist those developing business cases related to IPC activities, by enabling benchmarking. In due course, coupled with phase one and three, these findings will inform the development of framework for the optimal organisational support, staffing, skills and expertise of infection control units in Australian hospitals.



## Enhanced healthcare-associated bloodstream infection surveillance including assessment of preventability and timely feedback to clinicians: Why we did it.



### Author

Runnegar N

### Abstract

The timely dissemination of data to relevant parties is a desirable component of healthcare-associated infection surveillance if the ultimate goal of infection prevention is to be attained. We felt our healthcare-associated bloodstream infection (HA-BSI) surveillance data was not reaching those most likely to be able to influence infection rates. To improve the quality of our HA-BSI surveillance, we established a process for assessing preventable contributors to BSI episodes, and for providing direct feedback to clinical teams regarding our assessment. Methods for defining an individual episode of HA-BSI as 'preventable' will be discussed as will the associated caveats. The evidence for optimising feedback to engage clinicians will also be discussed.

## Enhanced Healthcare-Associated bloodstream infection surveillance including assessment of preventability and timely feedback to clinicians: How we did it.



### Author

Henderson B

### Abstract

Why collect healthcare associated infection data if you do not use that data to educate healthcare providers, with the goal of improved clinical practice and patient outcomes. A weekly multi-disciplinary BSI meeting and combined Infectious Diseases and Infection Control Practitioner rounds to assess 'preventability' of episodes of HA-BSI was implemented as a quality improvement exercise. Over the last three years our unit has evaluated each episode of healthcare-associated bloodstream infection (HA-BSI) for preventable contributors and provided this feedback to treating clinicians and ward nursing leaders through timely correspondence. The nature and collateral benefits of the meeting will be described, as will how we determined preventability and the mode of feedback. The impact of feedback on the incidence of *S. aureus* BSI in the renal unit will be given as an example of the benefits of the process. Our experience in maintaining the sustainability of the program will be discussed.

## Infection prevention and control in the prison setting – challenges and opportunities.



**Author**  
Montague C

### Abstract

The prison or correctional environment presents a diverse range of infection prevention and control challenges.

High risk practices (needle sharing, tattooing, unprotected sex), old environments, poor sanitation, overcrowding and poor general health status of the prison population are commonplace across the world.

In addition, health services may not have jurisdiction over the locations they are expected to practice within, yet are expected to hold a role in IP&C management across the prison population. Service delivery generally is negotiated across agencies with differing perspectives and priorities.

Systems and practice guidelines directly applicable to the prison setting within national or international literature beyond blood borne virus prevention and management are extremely limited. Accreditation standards predominantly are designed and interpreted for the acute healthcare setting. There is no established state or national benchmarking or systematic measurement of key performance indicators.

These factors all leave a widely varying standard of practice and process across the prison or correctional healthcare sector. The underpinning principles remain the same, addressing clinical, environmental and population health - however the application is the challenge!

This presentation will explore some of the challenges and opportunities that this very different healthcare practice setting poses to both the clinician and to IP&C governance.

# Cluster outbreaks of Toxic Anterior Segment Syndrome (TASS) in a Day Surgery performing Ophthalmology Surgical Procedures.

**Author**  
Reilly M



## Background

Toxic anterior segment syndrome (TASS), a rare complication of cataract surgery, is an acute, sterile inflammatory condition of the anterior chamber of the eye. TASS has numerous causes and most cases are attributed to the failure to properly reprocess ophthalmic surgery equipment and improperly prepared ophthalmic medications. Cases of TASS have been reported in the literature for nearly two decades. Until 2005, individual outbreaks occurred sporadically and the syndrome remained a relatively underrecognised potential complication. In June 2012, a private infection prevention consultancy service received a report of a cluster outbreak of TASS at a short stay facility performing ophthalmic surgical procedures.

## Methods

A systematic review of work processes and practices was undertaken to identify the possible cause of the outbreak and recommend prevention measures. Information was collected on the procedures performed, details of instrument reprocessing and products used during cataract surgery as well as clinical findings and patient outcomes.

## Results

Three patients were identified as having TASS during the outbreak period. The median age was 81.3 (range 80 – 83) years. The common presenting symptoms and signs were non-painful blurry vision and anterior segment inflammation the day after unilateral phacoemulsification and intraocular lens implantation surgery. Treatment included topical steroids and antibiotics. Full recovery was reported in all patients within 72 hours. There were no reports of significant breaches in surgical aseptic technique. Breaches in cleaning processes revealed several issues compounded by an inadequate number of ultrasonic handpieces for patient volume. Common practices included inadequate flushing of phaco and irrigation/aspiration handpieces, detergent at wrong concentration and ultrasonic cleaner duration. Some associations may have been confounded by surgeon preference for reusable irrigation/aspiration cannula. Control measures implemented included documenting the type and lot numbers of all products used during cataract surgery to facilitate future investigations of adverse outcomes such as TASS.

## Conclusion

Multiple potential factors relating to reprocessing of reusable medical devices may have contributed to this cluster of TASS. Control required a multidisciplinary response.

## Disclosure of Interest

Hands-On Infection Control is a private business providing consultancy, education and immunisation services to healthcare and related clients.

## Infection Control, Tattooing, Piercing and Fish nibbling.

### Author

Cullen M

### Abstract

In 2004 the Department of Health Victoria published new guidelines for Personal Care and Body Art Industries under the then Health Act 1958 and the now Public Health and Wellbeing Act 2008 and its Regulations 2009.

Given the number of alternative health and beauty procedures now available as well as the potential risks for skin penetration procedures this talk hopes to provide the audience with an understanding of the guidelines and the public health implications for these premises should a complaint arise, or as part of a public health investigation usually related to blood borne virus transmission.

# How to Establish yourself as a private infection control consultant.



**Author**  
Murphy C

## **Abstract**

Traditionally most infection preventionists (IPs) have been employed in clinical settings where direct patient care is delivered. More recently drivers such as public policy, accreditation, evolving technology and emerging infectious diseases have collectively created a market for independent consultants.

Establishing yourself as an independent is a major undertaking. It requires courage, tenacity, resilience, leadership, innovation and a sense of adventure. Most of all it requires relentless dedication, commitment and an ability to work doggedly. Independent consulting is not for the faint-hearted. It can be as challenging as it is rewarding.

In this presentation the audience will be given a glimpse into the critical steps, personal attributes and possible strategies needed to gauge your readiness for and ability to work as an independent infection prevention consultant. As well attendees will understand what a “typical” day looks like for an independent consultant. Methods for addressing and managing client and peer expectations including avoiding conflict of interest, open disclosure and transparency within the commercial in confidence and research arenas will be discussed as will the benefits and upside of being employed independently.

## **Disclosure of interest**

Professor Murphy is an independent, global infection prevention consultant currently providing services to multiple clients in the global medical industry.

## An exploration of Australian graduating nurses knowledge, intentions and beliefs regarding infection prevention and control.



### Authors

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3. School of Health Sciences, University of Tasmania
4. Tasmanian Infection Prevention and Control Unit, Department of Health and Human Services, Tasmania, Australia

### Background

Undergraduate nursing education is a key element of infection prevention and control (IPC) knowledge acquisition. There appears to be a lack of published Australian research into the effectiveness of IPC education in undergraduate nursing curriculums. This multi-centred cross sectional study aims to give an insight into the effectiveness of IPC education in undergraduate nursing curricula.

### Aim

This study measures the knowledge, intentions and beliefs of third-year Australian nursing students on key IPC concepts with the aim of determining graduating nursing students' knowledge of and intentions towards IPC practices.

### Methods

Final year undergraduate nursing students from six Australian universities were asked to participate in an anonymous on-line survey. The survey explored knowledge of both standard and transmission based precautions, their intentions and beliefs towards infection prevention and control and where they seek IPC information from.

### Results

349 students completed the study. The students correctly answered 90% of standard precautions questions, but only 27% of transmission-based precautions questions. No association was found between self-reported compliance with IPC activities and gender or age. The students held similar views on whether a range of topics posed infection control problems in Australian hospitals. We found a negative correlation between the participants increased knowledge of transmission based precautions and whether or not they thought these topics pose an infection control problem. Students surveyed were most likely to seek IPC information from an infection control professional followed by organisational policies and guidelines

### Conclusion

The results suggest that undergraduate nursing education on transmission-based precautions may be inadequate. This observation is pertinent given the increasing presence of new and evolving pathogens in healthcare environments and the important role that clinician education has on reducing the burden of healthcare associated infections. Further, the findings have implications for IPC professionals involved in the education of graduate nurses and those responsible for undergraduate nursing curricula.

### Disclosure of interest statement

This study was funded by Covidien through a competitive grant process.

## Outbreaks and what it means to be “riding to glory on the downhill slope of the epidemic curve.”



### Author

Schweizer M

### Abstract

All outbreaks will, eventually, come to an end. Often infection prevention interventions are credited for ending an outbreak, when really we may just be “riding to glory on the downhill slope of the epidemic curve.” In this plenary we will discuss 1) common features of outbreaks; 2) common pitfalls in assessing the effectiveness of interventions, such as regression to the mean and maturation effects (seasonality), and 3) how to avoid these pitfalls.

PLENARY 3



## Implementation of impregnated washcloths and 2% chlorhexidine bathing in clinical areas with a focus on reducing the incidence of vancomycin resistant enterococci (VRE) colonisation and surgical site infections.

### Author

Beckingham W

### Abstract

This presentation will highlight our hospitals journey to change bathing solutions for patients in a number of clinical areas and whether this change resulted in a decrease in VRE and/or surgical site infections.

Throughout 2009 the Canberra Hospital experienced a dramatic increase in the number of patients identified with VRE from 48 in 2008 to 132 in 2012. This figure has remained constant across the campus.

In October 2013 2% chlorhexidine impregnated wash cloths were introduced into our adult ICU. In March 2014 2% chlorhexidine bathing was introduced to oncology and orthopaedics. June saw the introduction of wash cloths introduced to birthing suite for use in cases of emergency caesarean sections.

Data obtained from this quality improvement project will be used to inform healthcare workers about a simple intervention that can be used to help reduce VRE and possibly health care associated infections. Benefits gained from this project will support the growing body of evidence for use of 2% chlorhexidine impregnated washes and 2% chlorhexidine bathing by reducing MRO's. Findings from this work can be used to address potential risk factors and enhance patient care and safety.

# What are the essential elements of a successful quality improvement (QI) project for research and publication?



**Author**  
Bass P

## Abstract

Development of a successful QI project for research and publication requires a multifaceted team approach.

It is critically important to define the aim of the project and consider the impact organizationally. The Triple Aim framework from the Institute of Healthcare Improvement (IHI) describes an approach to optimizing change in healthcare that is systematic and focuses on improving the patient experience, improving the health of populations or reducing the cost of healthcare. This is a useful framework in which to clearly define the outcome of any QI project.

Quality improvement consists of systematic and continuous actions that lead to clearly defined measurable improvements over time. There are many models that can be adapted to health care for improvements in quality such as six sigma models (DMAIC), the plan, do, study, act (PDSA) and root cause analysis (RCAs). It is important to choose the right model for your organizational structure and workflow and ensure alignment with your outcomes. It is fundamental that data collection and analysis is appropriate to maintain validity of the study, and that the study or project design can be reliably reproduced.

Many infection prevention and control studies have been associated with methodological weakness, lack of detail in study design, inadequate reporting of published literature and frequent failure to consider threats to validity. In addition data analysis was often not appropriate. The ORION guidelines were released in 2007 aiming to increase standards of research and publication and facilitate well designed studies that could be reproduced and ultimately impact positively on healthcare and the patient experience. They provide a useful tool and highlight key considerations in designing and reporting any quality improvement interventional study/project and include a 22 point checklist.

This presentation will describe key considerations for a robust quality improvement study/project, considering recommendations highlighted in the ORION guidelines.

## Antimicrobial use in Tasmanian rural hospitals – a pilot study.



### Authors

Wilson F<sup>1</sup>, Wells A<sup>1</sup>.

Tasmanian Infection Prevention and Control Unit, Department of Health and Human Services, Tasmania, Australia

### Background

Surveillance on antimicrobial use can provide data to assess usage patterns and can be important for supporting antimicrobial stewardship programs.

The Tasmanian Infection Prevention and Control Unit (TIPCU) in conjunction with the Tasmanian Antimicrobial Stewardship Network (TASNET) have developed an antimicrobial surveillance module which includes a protocol and data collection form. This module is a component of the TIPCU Infection Control Assessment Program (ICAP) for rural hospitals and non-acute settings. The module uses patient level antimicrobial data collection which can give accurate information about antimicrobial use within a facility. Data to be collected includes patient demographics, rationale for treatment, drug name, dosage, duration of therapy and microbiological testing.

### Aim

To pilot the antimicrobial use protocol and data collection tool to assess 1) the usability of the tools; 2) antimicrobial usage over one month in three rural Tasmanian hospitals; 3) the appropriateness of antimicrobial usage in accordance with Therapeutic Guidelines: Antibiotic Guidelines and 4) if the data collected can be used to give feedback of prescribing practices to medical practitioners, as well as informing targeted education programs.

### Methods

The protocol and data collection tool were distributed to three rural hospitals for use for one month on all inpatients in sub-acute beds who were prescribed antimicrobial treatment. Patients in designated aged care, long term care, rehabilitation or palliative care beds were excluded from the pilot study.

### Results

The pilot study took place during August 2014. There were 32 completed forms returned to TIPCU from the 3 participating sites. Of the 32 patients who received antimicrobials, 17 had one antimicrobial, 11 had 2 antimicrobials, 2 had 3 antimicrobials and the remaining 2 patients had 4 and 6 antimicrobials respectively. Further analysis of the results will be presented and will include the usability of the data collection tool and the appropriateness of antimicrobial usage in accordance with Therapeutic Guidelines: Antibiotic Guidelines.

### Disclosure of interest statement

The authors have no conflicts to declare and no funding was received by the authors in connection to the work presented.

# Whole genome sequencing for outbreak investigation.

## Author

O'Sullivan M



## Abstract

The cost of whole genome sequencing of bacteria has fallen dramatically over recent years, due to the development of next-generation sequencing technologies. This has led to an exponential increase in the numbers of bacterial genomes being sequenced, and many clinical and public health microbiology laboratories now have the ability to perform whole genome sequencing (WGS). WGS can potentially be used as a strain typing method providing the ultimate level of discriminatory power. With WGS, microevolution during the course of an outbreak can be elucidated, giving information about the directionality of transmission chains. At the same time, WGS can be used for species identification, susceptibility profiling and detection of virulence determinants. Current limitations of WGS include the specialised expertise and high-performance computing platforms required for data storage and analysis, and the lack of standardised pipelines and interpretative criteria. Additionally, within-host microevolution can confound the interpretation of WGS data. Nevertheless, WGS is likely to become a core component of clinical microbiology and infectious diseases surveillance in coming years.

## Medical tourism and antibiotic resistance – What are the risks?

### Author

Playford G

### Abstract

Medical tourism (or cross border healthcare) is not a new industry. Over recent decades however it has boomed by providing healthcare that is cheaper than in many developed countries and is provided in typically exotic locations. There are important trade offs that consumers need to be aware of, including clinical, financial, ethical, and legal implications and risks. In particular, an increased risk of infection with antibiotic resistant pathogens, in many cases, coincides with locations commonly providing medical tourism. This poses many important clinical implications for the consumer of medical tourism as well as for facilities that may have to manage complications of procedures performed overseas. This talk will highlight the scope, risks, and implications of the increasing medical tourism industry.

# Benefits of Single Patient Rooms – An Infection Prevention Perspective

## Author

Scott S<sup>1</sup>, King S<sup>1</sup>, Butcher T<sup>1</sup>, Daley A<sup>2</sup>

1 Infection Prevention and Control, Royal Children's Hospital

2 Microbiology Department Royal Children's Hospital

## Background

The Infection Prevention and Control Department worked with the New Hospital Design team on the design, construction, and furnishing of the new Royal Children's Hospital (RCH) to improve compliance to Infection Control practices. This included the review and redesign of single and shared room patient accommodation, placement of hand basins, increased negative pressure rooms and revision of infection control practices. The new RCH is comprised of 80% single patient rooms.

## Aim

To evaluate the effectiveness of single patient rooms as an environmental control in reducing hospital acquired infections.

## Methods

Surveillance for hospital acquired infections was undertaken 2 years before and after the move to the new site in November 2011. Outcome measures included hospital acquired viral infections and central line associated blood stream infections determined by state and national surveillance definitions. Hand hygiene (HH) compliance auditing was continued as a marker of improved access to HH product placement and access to sinks.

Identification of clusters and exposures to infectious diseases were determined from pathology department alerts and ward notifications.

Revision of infection control practices was undertaken leading to the development of additional resources to support changes through education and family information.

## Results

A reduction in hospital acquired infection has occurred since the move to the new RCH site. Preliminary data indicates a 80% reduction in hospital acquired gastroenteritis and a 40% reduction in hospital acquired respiratory infections. Hospital wide central line associated infections have reduced from 2.7 per 1000 line days to 1.8 per 1000 line days in 2013. Hand hygiene compliance has increased from 66% in 2011 to 80% in 2014.

Infection Prevention and Control principles should be incorporated in the design of new hospital facilities to ensure there is flexibility to maintain a patient centred approach to prevention and management of infections.

## Disclosure of interest statement

The authors have no conflicts to declare and no funding was received by the authors in connection to the work presented.

## Two different microorganisms causing outbreaks in two different clinical settings

### Author

Beckingham W

### Abstract

A perplexing problem occurred in the later part of 2013 in the haemodialysis unit with an outbreak of *Burkholderia cepacia* bacteraemia. Patients who were affected all had tunnelled central venous catheters (Vascaths).

A second problem occurred early 2014 with CRE being identified in ICU. It was noted that two ICU patients had CRE – *Enterobacter asbursiae* - isolated from clinical specimens during December 2013 and January 2014. Subsequent genetic analysis showed that the two isolates were essentially identical, indicating transmission between patients.

It is planned to highlight to you how our Infection Prevention and Control Unit went about trying to identify the source of contamination whilst implementing other measures to prevent further cases. In addition how important working together with the various medical, intensive care and microbiology teams allowed solutions to be found.

# The Introduction of a risk-based assessment tool to determine ESBL precautions.



**Author**  
Barratt R

## Abstract

In keeping with global trends, the numbers of extended-spectrum beta-lactamase producing Enterobacteriaceae (ESBL-E) colonised or infected patients admitted to Canterbury District Health Board hospitals has increased significantly over the last few years. Many of the hospital facilities are old, with limited numbers of single rooms and toilets. ESBL-E patients compete for suitable isolation placement alongside MRSA, VRE, gastroenteritis and other infectious diseases.

This session will demonstrate how an infection prevention and control (IPC) risk assessment of patients colonised or infected with ESBL-E can help prioritise isolation facilities.

## Objectives

Discuss the challenges and practicality of implementing IPC isolation measures in older hospital facilities.

Demonstrate a novel assessment tool to determine the risk of transmission of ESBL-E in individual patients

Describe the implementation of the tool to the clinical departments

Discuss the limitations of the tool and implications for the future



## Partnerships across countries: Implementing hand hygiene program in a resource-poor environment.

### Authors

Gardiner T, Setiawati A

### Abstract

After the Bali bombing in 2002, the Australian government funded a program of support and education for the Sanglah Hospital in Bali, Indonesia. This program was to develop improved outcomes via education and site visits to Bali for Australian nurses and medical staff and Balinese nurses to come to Royal Darwin Hospital. The infection prevention & Management unit supported the program with education and Australian initiatives. The hand hygiene program was the first major initiative introduced into Sanglah using the WHO guidelines and the HHA program. This presentation discusses the support and changes that were employed for significant changes and outcomes in a resource poor environment.

## GOARN Partners in the field – Ebola Outbreak Response in West Africa.

### Author

Salmon S



### Abstract

In February 2014, Guinea, Liberia and Sierre Leone experienced their first case of the Ebola Virus Disease. Never before seen in West Africa, over 700 cases have since occurred, making it the largest Ebola Virus Disease Outbreak ever with transmissions and very high mortality continuing until now. Many of the cases occur in health care workers. Health services are provided in very difficult circumstances normally, hence controlling this outbreak is a major challenge. In April 2014, Sharon Salmon and Dale Fisher from National University Hospital, Singapore (a GOARN partner institute) were requested by the World Health Organisation to join a mission to assist the Liberian Ministry of Health. They provided health facility assessment, infection control and case management advice to the National Operations Centre as well as trainings and support in the most affected areas. The evolution of the Ebola virus disease outbreak in Guinea, Sierra Leone and Liberia remains a serious concern as primary and secondary viral transmissions continue to occur in both urban and rural communities.

CONCURRENT SESSION 6: RAPID GLOBAL RESPONSE TO EMERGING INFECTIOUS DISEASES, INFECTION CONTROL IN REMOTE & RESOURCE LIMITED SETTINGS & ENVIRONMENTAL CLEANING, DISINFECTION & MONITORING

## The role of ACIPC in supporting global and national efforts in the control and containment of communicable disease.

### Authors

Boardman C



### Abstract

The College is committed to providing support to its members and other organisations to ensure evidence based infection prevention and control practice and protocols are in line with internationally recognised best practice. This presentation details the role of the College in providing assistance and expert advice to national and international key bodies including: the Australian Health Protection Principal Committee - Infection Prevention & Control Expert Advisory Group and, the Global Outbreak And Response Network (GOARN), of which ACIPC is a partner organisation and participates in meetings of the GOARN Steering Committee (SCOM) and the WHO Ebola Emergency Response Training Coordination Working Group.

## Antimicrobial stewardship in the New Zealand community.

### Author

Williamson D



### Abstract

One of the key factors responsible for the emergence and spread of antimicrobial resistance is the use and overuse of antimicrobials. As such, knowledge of the consumption of antimicrobials within a population provides insights into how and where antimicrobials are being used, and where educational and regulatory interventions can be targeted. The largest proportion of antimicrobial consumption occurs in the community setting, although to date, information on the trends and demographics of antimicrobial consumption in the New Zealand community have been scarce. This talk will provide an overview of antimicrobial consumption in the New Zealand community, with a focus on potential strategies designed to reduce inappropriate usage of antimicrobials.

# Antibiotic Computerised Decision Support System Reduces Mortality Risk

**Author**  
Chow A



## Introduction & Objective

Antibiotic computerised decision support systems (CDSS) have been shown to improve antibiotic prescribing, but evidence of beneficial patient outcomes is limited. Providing information on the benefits of improved clinical outcomes is essential to increase physicians' acceptance of antibiotic CDSS. Our study's objective was to evaluate the effect of antibiotic CDSS on clinical outcomes.

## Methods

We assembled a prospective inpatient cohort, starting from the point of antibiotic prescribing to 30 days post-hospital discharge or 180 days post-antibiotic prescription. All patients admitted to a 1500-bed tertiary-care hospital in Singapore, from October 1, 2011 through September 30, 2012, and prescribed piperacillin-tazobactam or a carbapenem for empiric therapy resulting in the automatically-triggered launch of the in-house CDSS to receive antibiotic recommendations were included. The CDSS integrates antimicrobial stewardship with electronic antibiotic prescribing. Receipt of antibiotics recommended by CDSS was determined by matching antibiotics on the electronic prescribing system with CDSS-recommended antibiotics. Primary outcome was 30-day all-cause mortality. Secondary outcomes included incidence of *Clostridium difficile* (CDI) and multidrug resistant organism (MDRO) infections, and 30-day all-cause readmission. Odds ratios (OR) and confidence intervals (CI) were computed and multivariable multilevel logistic regression models constructed to control for potential confounding.

## Results

One-quarter of 1886 eligible inpatients received CDSS-recommended antibiotics. More patients treated for pneumonia (33.2%) than sepsis (12.1%) and urinary tract infection (7.1%) received CDSS recommendations. Receipt of recommendations seemed to halve the mortality risk of patients (adjusted OR 0.52, 95% CI 0.26-1.07,  $P=.08$ ). Patients aged  $\leq 65$  years had a greater mortality benefit (OR 0.45, 95% CI 0.20-1.00,  $P=.05$ ) than patients aged  $>65$  (OR 1.28, 95% CI 0.91-1.82,  $P=.15$ ). No effect was observed on incidence of CDI (OR 1.02, 95% CI 0.34-3.01,  $P=.97$ ) and MDRO infection (OR 1.06, 95% CI 0.42-2.72,  $P=.90$ ). No increase in readmission (OR 1.13, 95% CI 0.64-1.99,  $P=.68$ ) was found in survivors.

## Conclusion

Receipt of antibiotic CDSS recommendations reduced mortality risk in patients aged  $\leq 65$  and did not increase the risk in older patients. Physicians should be informed of the benefits to patients to increase their acceptance of CDSS recommendations.

# A Survey of Infection Control and Antimicrobial Stewardship Practices in Australian Residential Aged Care Facilities

**Author**

Stuart R



## Background

The global population is aging. With the high prevalence of dementia and functional decline in older Australians, many aging adults with disabilities reside in Residential Aged Care Facilities (RACFs). Residents in RACFs are vulnerable to infections due to frailty, poor functional status, multiple comorbidities and compromised immune systems. In addition, close living proximity and frequent carer-resident contact facilitate the spread of organisms. The aim of this study was to characterize the current infection prevention and antimicrobial stewardship (AMS) practices in Australian RACFs. These findings may then inform an ongoing research agenda. The study group included members from the Australian Society of Infectious Diseases (ASID) and the Australasian College for Infection Prevention and Control (ACIPC).

## Methods

All managers of Australian RACFs having more than 50 beds were contacted by email/phone to ask if they would like to participate in the online survey. Completion and submission of the survey implied consent.

The survey included questions on the population demographics of the facility, the expertise/availability of infection control personnel, the availability of infection control and AMS procedures/guidelines, the type of surveillance undertaken in the facility and the availability of vaccination programs for staff and residents.

The Commonwealth Departmental Ethics Committee approved the project. Results 265 surveys were returned (from a possible 1700 RACF (16%)). All states were represented with 17% being public run facilities. Most facilities had procedures available for the management of common infection control issues, with the majority performing routine surveillance for a number of conditions. Few facilities had any AMS policies, with only 14% stating they had any antimicrobial prescribing restrictions. Although most facilities had the ability to offer vaccination to residents (influenza vaccination rates being above 75% in 73% of facilities), pneumococcal vaccination was poor with up to 50% of facilities stating they were unaware of the pneumococcal vaccination status of their residents.

## Discussion

This large survey of RACFs has demonstrated some important areas for ongoing research, namely AMS and vaccination.

## Group A Streptococci (GAS) may cause life threatening infections. Elderly residing in long term care facility (LTCF) are especially at risk.



**Author**  
Schousboe M

### Aim

Analyse two closely related outbreaks with GAS emm type 81 resulting in high mortality in a large LTCF.

An outbreak was suspected in May 2014 when three patients in the hospital had positive blood cultures with GAS and all admitted from the same LTCF address. An outbreak meeting was called which included hospital staff and Public Health officials. Controls first initiated included throat cultures of exposed hospital and facility staff and the residents in the facility section shared with the admitted patients. Secondly, wounds from any facility staff or residents were cultured. Antibiotic prophylaxis was offered to close contacts. The facility was provided with the assistance of an experienced Infection Control Nurse Specialist.

### Results

The GAS antibiotic profile included resistance to Erythromycin and Clindamycin. All GAS outbreak isolates had that antibiotic profile and the reference laboratory reported it as emm type 81. Within seven days four more patients had been admitted all with positive wound or throat cultures. Only one non admitted resident had positive throat culture. Two LTCF staff had positive hand lesions with emm 81. No hospital staff were carrying the organism. Overall five patients died.

The LTCF underwent an extensive disinfection and infection control review. The outbreak was under control in one week and no further infections recorded during a month intensive monitoring. Two months later the second outbreak was identified by admission of the facility manager with GAS throat infection followed by admission of four residents, one with positive blood culture and others with positive throat or wound cultures. Screening was again initiated and one staff was found GAS positive on a finger swab. No mortality was recorded in this outbreak.

### Discussion and conclusion

GAS outbreaks with emm type 81 have been recorded in the literature. This isolates showed a high potential for invasive infection in the elderly resulting in high mortality. Rapid intervention, included early admission to hospital of ill residents, laboratory screening for GAS and multidisciplinary cooperation, was successful in controlling the outbreaks.

# What factors predict a patient's receipt of antibiotics recommended by Computerised Decision Support Systems?

**Author**  
Chow A



## Background

Antibiotic computerised decision support systems (CDSS) were developed to guide antibiotic decisions, yet prescriptions of CDSS-recommended antibiotics have remained low. Our study's aim was to identify patient and physician predictors of patients' receipt of antibiotic recommendations by antibiotic CDSS.

## Methods

We conducted a prospective cohort study in a 1500-bed tertiary-care hospital in Singapore. We included all patients admitted from October 1, 2011 through September 30, 2012, who were prescribed piperacillin-tazobactam or carbapenem for empiric therapy and auto-triggered to receive antibiotic recommendations by the in-house antibiotic CDSS. The antibiotic CDSS integrates antimicrobial stewardship with electronic antibiotic prescribing, and provides recommendations on the narrowest-spectrum antibiotic for the common pathogens associated with the diagnosed infection based on the local epidemiology and antibiotic susceptibility patterns, taking into account the individual patient's antibiotic allergies and renal function. Relevant data on the patient, prescribing and attending physicians were collected via electronic linkages of medical records and administrative databases. To account for clustering, we used multilevel logistic regression models to explore factors associated with the receipt of antibiotic CDSS recommendations.

## Results

One-quarter of the 1886 eligible patients received CDSS-recommended antibiotics. More patients treated for pneumonia (33.2%) than sepsis (12.1%) and urinary tract infection (7.1%) received CDSS-recommended antibiotics. Patients who received antibiotic CDSS recommendations were older (mean 74.8 years [SD 14.5] vs. 71.8 [15.9]) and had better chronic health status (Charlson's comorbidity index >5 11.5% vs. 14.2%) than those who did not. The prescribing physician — but not the attending physician or clinical specialty — accounted for some (13.3%) of the variation. Prior hospitalisation in the preceding 90 days (OR 1.32, 95% CI 1.01-1.71), presumed pneumonia (OR 6.77, 95% CI 3.28-13.99), intensive care unit (ICU) admission (OR 0.38, 95% CI 0.21-0.66), and renal impairment (OR 0.70, 95% CI 0.52-0.93) were factors associated with patients' receipt of the CDSS recommendations.

## Conclusion

Prior hospitalisation and pneumonia as the diagnosed infection positively predicted a patient's receipt of CDSS-recommended antibiotics, while ICU admission and renal impairment were negative predictors. Patients admitted to ICU and those with renal impairment might have more complex clinical conditions that require a physician's assessment in addition to CDSS recommendations.



# Distribution of Serotypes and Antibiotic Susceptibility Patterns Among Invasive Pneumococcal Diseases in Saudi Arabia

## Author

Marie M

## Background

*Streptococcus pneumoniae* causes life-threatening infections such as meningitis, pneumonia, and febrile bacteremia, particularly in young children. The increasing number of drug-resistant isolates has highlighted the necessity for intervening and controlling disease. To achieve this, information is needed on serotype distribution and patterns of antibiotic resistance in children.

## Methods

All cases of invasive pneumococcal disease (IPD) in children aged less than 15 yr recorded at King Khalid University Hospital, King Saud University, Riyadh, Saudi Arabia, were reviewed for serotyping and antibiotic susceptibility. Isolates were collected from 78 consecutive patients with IPD between 2009 and 2012. All collected isolates were subjected to serotyping by co-agglutination, sequential multiplex PCR, and single PCR sequencing as previously described.

## Results

The most frequently isolated IPD serotypes were 23F, 6B, 19F, 18C, 4, 14, and 19A, which are listed in decreasing order and cover 77% of total isolates. The serotype coverage for the pneumococcal conjugate vaccine (PCV)7, PCV10, and PCV13 was 77%, 81%, and 90%, respectively. Results from sequential multiplex PCR agreed with co-agglutination results. All serotypes could not be correctly identified using single PCR sequencing. Minimum inhibitory concentration showed that 50 (64%) isolates were susceptible to penicillin, whereas 70 (90%) isolates were susceptible to cefotaxime.

## Conclusions

The most common pneumococcal serotypes occur with frequencies similar to those found in countries where the PCV has been introduced. The most common serotypes in this study are included in the PCVs. Addition of 23A and 15 to the vaccine would improve the PCV performance in IPD prevention. Key Words: Pneumococcus, Pneumococcal conjugate vaccine, Serotype, Vaccination.

# Improved biofilm killing by utilising combined antiseptic or antibiotic instillation with topical negative pressure therapy - an in vitro study



**Author**

Tahir S

## Abstract Background/Aims

Non healing chronic wounds are major cause of morbidity and mortality worldwide. Bacterial biofilm colonisation and infection is established to be a major contributing factor. In this study we tested efficacy of commonly used wound antiseptics and combined topical negative pressure (TNP) therapy in vitro to determine their efficacy against bacterial biofilms in the absence of the host immune response.

## Methods

The Minimal Biofilm Inhibitory Concentration (MBIC) and the Minimal Biofilm Eradication Concentration (MBEC) of the test antiseptics on *Pseudomonas aeruginosa* and *Staphylococcus aureus* biofilms were determined. Bacterial biofilms of these selected bacteria were grown in-vitro on polycarbonate coupons in the CDC bioreactor. Biofilm covered coupons were then placed into our modified in-vitro wound model and subjected to various treatments. Each biocide was tested with 4x instillations per day of antiseptic, antibiotic or saline against *P.aeruginosa* and *S.aureus* alone or combined with continuous TNP therapy at -125mmHg. The bacterial biofilm was then harvested for viability counts, statistical analysis, confocal and scanning electron microscopy.

## Results

Initial colony forming unit (cfu) counts for *P.aeruginosa* and *S.aureus* were 10<sup>7</sup>. With or without TNP inhibitory concentrations of Povidone-iodine instilled 4 times/day reduced *P.aeruginosa* biofilm cfu by 10<sup>1</sup>fold or 1 log while 4x/day instillations of Prontosan with or without TNP reduced cfu by 10<sup>3</sup> fold or 3 logs. Without TNP 4x/day instillation of Povidone-Iodine or Prontosan in *S.aureus* did not reduce cfu nor increased the counts however cfu was reduced by 10<sup>2</sup>fold or 2logs with combined TNP and 4x/day instillation of Povidone-Iodine, 10<sup>4</sup>fold or 4logs reduction with combined TNP and 4x/day instillation of diluted Prontosan and 7 log reduction with undiluted Prontosan. SEM confirms statistical results.

## Conclusions

We had previously shown that TNP changed the structure of *P.aeruginosa* biofilm and that this physical change was associated with increased sensitivity to silver ions. In this study we have confirmed that TNP increases the vulnerability of both *P.aeruginosa* and *S.aureus* biofilms to commonly used wound antiseptics and antibiotics. In future we hope to improve management of chronic wounds, significantly with combined TNP and biocide treatment reducing the health costs and improved patient management.

## The debate: What is my duty of care?



### Author

Roderick A

### Background

Throughout the world health practitioners understand they have a duty of care to patients and clients. However, what does 'duty of care' mean in reality when there are challenging circumstances and conflicting needs.

### Methods

Over a two year period nurses' were studied in an Australian intensive care unit. Using observation, interview and document analysis, nurses' infection control activities were understood in the context of everyday practices. This enabled a better understanding of individuals' infection prevention and control practices within a context of competing demands and multiple requirements.

### Discussion

During this study it became clear that this concept of duty of care was vital to the very nature of health care practice. Take the example of a ventilated patient who attempts to remove their endotracheal tube (self-extubation). On the one hand we are required to fulfil the 5 moments of hand hygiene. But as many clinicians pointed out, when faced with a patient who is at risk of self-extubation, their choice is to protect the endotracheal tube without hand hygiene. The question is not 'do we have a duty of care' rather 'to which aspect of care does this duty need to be fulfilled'? Is it the endotracheal tube or five moments of hand hygiene?

### Conclusion

By questioning knowledge and practice, health care can be enabled and prepared for future and emergent infections. This debate is particularly necessary given recent developments in Ebola Haemorrhagic Fever and Seasonal Flu. This debate will challenge all clinicians, both in their practice and their knowledge of infection prevention and control. Our challenge is both infection prevention and infection control. Can we do this and still fulfil our duty of care?

### Disclosure of interest

This research project was a self funded project for Doctor of Philosophy studies at Flinders University.

# What is the scope of practice for infection control professionals in Australia? Preliminary results from a national survey



**Author**  
Hall L

## Background

Despite the longevity of infection control programmes in Australia, little is known about their structure, effectiveness or sustainability. Two reports commissioned by the Australian Commission on Safety and Quality in Healthcare identified the scant nature of detail on current skills, education, organisational support, staffing and resources, of infection control professionals (ICPs) as they relate to implementing an effective programme; a process made more challenging by increasing scope of practice.

## Methods

A confidential web-based cross-sectional survey was developed based on standardised instruments used in previous studies from the USA, UK, Canada and Victoria, Australia. The survey included sections on: demographics; current roles and responsibilities; information needs and seeking, and resource availability and use. A snowball recruitment strategy was used to invite individuals currently employed as an ICP in Australian hospitals to participate. A descriptive statistical analysis to examine roles and responsibilities was performed for all ICPs, with sub-analyses by ICP type (novice vs. experienced), work-type location (metro vs. regional vs. rural), and hospital type (public vs. private) to describe scope of practice, and access to relevant resources.

## Results

A total of 300 ICPs completed the survey. The majority came from a nursing background (n= 215, 72%); fewer held specialised infection control qualifications (n=173, 58%). Around half of the ICPs (n=177, 56%) were employed in tertiary acute hospitals (49 private, 128 public). Scope of practice was diverse; nearly all ICPs identified at least two responsibilities within the following domains: prevention and control of infectious agents (n=290, 97%); communication and organisational support (n=286, 95%), surveillance (n=281, 94%), and administrative responsibilities (n=275, 92%). Access to the expertise, resources and organisational support required to undertake these activities varied.

## Conclusion

This research will help outline the skills, educational, staffing and organisational support required to deliver an infection control programme in Australia, including current gaps. It will support ACIPC to refine the scope of practice for ICPs and better target education strategies. The outcomes of this study will support better decision-making by ICPs, assisting them to develop robust business cases and to advocate for effective use of resources.

## Disclosures of interest

Nil

# A cross-sectional survey of gastrointestinal carriage of and environmental contamination with *Clostridium difficile* in aged care residential facilities



**Author**  
Williams A

## Abstract

*Clostridium difficile* is a major cause of antibiotic-associated diarrhoea which occurs at higher rates in the elderly. Internationally, 4-20% of elderly persons living in institutions are asymptomatic carriers of *C. difficile*; there has only been one published study from Australia which reported a prevalence of 0.6%. Carriers of *C. difficile* may shed spores into the environment, undermining infection prevention and control measures.

We conducted a cross-sectional study to determine the prevalence of *C. difficile* carriage within the population of residents in an aged care facility (ACF) and the extent of environmental contamination with *C. difficile* within the ACF. All (approx. 350) residents of six sites across one not-for-profit ACF provider were eligible to participate. Faecal samples were collected on a single day of testing, along with environmental samples taken on the same day from the bathroom floor and door handles from participating residents' rooms with MWE Polywipe sponges. All stool and environmental samples were cultured for *C. difficile* on bioMerieux ChromID agar. Detection of *C. difficile* in faecal samples was also performed using the BDMax Cdiff RT-PCR assay. *C. difficile* isolates were characterised using ribotyping and PCR detection of toxin genes.

No participating resident had symptoms of infection with *C. difficile*. In those 118 residents who supplied faecal samples, the prevalence of *C. difficile* carriage was 7.6% [95%CI 3.1 - 12.2]. Rooms of 95 residents who provided samples were tested and five residents' rooms were positive for *C. difficile* on the bathroom floor, door handles or at both locations (5.3% [95%CI: 0.93 - 9.6]). Floors were more likely to be contaminated than doors. There was a strong association between having a positive faecal sample and a positive environmental sample (RR: 36 [95%CI: 8.5 - 151.8];  $p = <0.01$ ). Our study showed a relatively low rate of carriage *C. difficile* in this ACF population. The prevalence was in keeping with internationally reported rates; however, it was considerably higher than previous reports within Australian ACFs. Furthermore, these results show the potential for asymptomatic carriers to circumvent current infection prevention and control measures within ACFs.

# Hepatitis A and E virus seropositivity amongst healthy young adults in india: implications for immunisation & public health policy

## Author

Kotwal A

## Introduction

Various Serosurveys and studies provide ample evidence of differing perspectives regarding epidemiology of HAV and HEV in India and other developing countries. This study was conducted to assess seroprevalence of HAV and HEV and its associated factors with an aim to provide inputs to planners regarding requirement of HAV vaccine. Proportion of fresh HAV and HEV positives among patients admitted to few tertiary HCFs was also assessed.

## Methods

A multi-centric cross sectional survey amongst 4175 healthy young adults was carried out in training centers, selected by multistage random sampling, giving equal representation to all regions of India. Sample size was calculated by taking prevalence of HAV seropositivity amongst adults as 60% and alpha 5 %. A total of 695 patients were also evaluated in four selected hospitals.

## Results

Seroprevalence for HAV and HEV was 92.68% (95% CI, 91.82, 93.47) and 17.05% (15.90, 18.26), respectively. Bivariate analysis found statistically significant association ( $p < 0.05$ ) between HAV and HEV seropositivity with various factors. Logistic regression showed that hand washing without soap, regular close contact with domestic animals, consumption of unpasteurized milk and regular consumption of food outside home were risk factors for HAV ( $p < 0.05$ ). For HEV, irregular hand washing, consumption of unpasteurized milk and irregular consumption of freshly prepared food were risk factors ( $p < 0.05$ ). Among patients, the distribution of HAV, HEV, HBsAg and HCV was 10.22%, 21.87%, 16.98% and 3.74%, respectively.

## Discussion

A high natural immunity against HAV among the healthy young adults clearly demonstrates that vaccination against HAV is not required at present. The large proportion being susceptible to HEV points towards the requirement of preventive strategies in the form of safe drinking water supply and sanitation, increasing awareness through information, education and counseling and behaviour change with respect to personal hygiene especially hand and food hygiene.

# Monitoring occupational exposures to blood and body fluids across Victorian Hospitals

## Authors

Johnson S Bradford J Richards M

## Background

Monitoring and follow-up of occupational exposures to blood and body fluids (BBF) is a key role for Infection Control Practitioners (ICPs) and is a requirement of the National Safety and Quality Health Service Standards. Current systems used in Victorian hospitals include: the mandatory Victorian Health Incident Management System (VHIMS) which is an Occupational Health and Safety (OHS) tool; the voluntary Victorian Blood Exposure Surveillance (ViBES) system developed and maintained by ICPs from large Victorian hospitals (>100beds); and, the Occupational Exposure Surveillance in Small Victorian Hospitals? (<100beds) collected by the Victorian Healthcare-Associated Infections Surveillance System (VICNISS) coordinating centre. This project aims to review the current systems used in Victorian hospitals to monitor and follow-up occupational exposures to BBF and the rates of exposures reported.

## Methods

VHIMS collects information on needle-stick/sharps injuries and biological occupational exposures; it is generally anonymised and relies on self-reporting by healthcare-workers (HCWs). ViBES is completed by ICPs and includes information on the incident, the HCW and disease status of the source. The VICNISS occupational exposure includes the type of exposure and source. The format and most recent data available from each system are described.

## Results

VHIMS aggregate data has not been reported. ViBES reported the rate of total and parenteral occupational exposures to BBF 0.54 and 0.39 per 1,000 occupied bed-days respectively in 2012/13, of which the rate of parenteral exposures of significant risk (involving a used needle) of 0.10 per 1,000 occupied bed-days. VICNISS reported the rate of parenteral and non-parenteral occupational exposures to BBF in small hospitals was 4.2 and 2.1 per 10,000 acute occupied bed-days respectively in 2013. Conclusions: Current systems used for monitoring occupational exposure to BBF collect information use varied case definitions. Data from the systems are reported sporadically and use different denominators, occupied bed-days vs acute occupied bed-days, making comparisons between systems difficult. Accurate estimates of occupational exposures to BBF and the associated burden of disease are difficult to calculate. Additional research is required to evaluate the systems used to ensure Infection Control and OHS standards are met efficiently and to ensure data are consistent and more generalisable.

# Staff Influenza Vaccine Uptake and Refusal in a Rural Health Service

## Author

Fowler L



## Abstract

In many health care settings the spread of influenza from health care worker (HCW) to patient is not easily demonstrated even though it probably occurs frequently. Convincing a HCW to be vaccinated against influenza is reliant on the purported benefits of the vaccine and ease of accessibility to the vaccination program.

In 2013 Cochrane summaries it was reported that there was no evidence that only vaccinating healthcare workers prevents influenza in individuals in aged care facilities and thus no evidence to mandate compulsory vaccination of healthcare workers. This was cited during the 2014 season by HCWs as evidence that influenza vaccination was not efficacious and should not be undertaken.

Against this background for the 2014 influenza season the Victorian department of health set a challenging target of a 75% HCW influenza vaccination rate in public health care services. At Bairnsdale Regional Health Service (BRHS) we undertook to attain the target by instituting a four-fold approach.

Firstly it was made mandatory for every employee to complete a declaration form at the start of the season. This form was distributed with their payslip and collected by the manager who entered receipt in the employee competency database. Employees commencing during the vaccination program were required to submit a declaration. Secondly vaccination clinics were held near places that staff frequented and at the times they frequented them. Thirdly, employees that didn't complete the declaration were followed up by their manager or by mailing a reminder letter. Finally those that declared yes but hadn't attended a clinic were pursued in order to ensure vaccination occurred.

Initial results for the 2014 program were that 71% of BRHS employees were vaccinated while 20% refused. In comparison during the 2013 season 57% were vaccinated with a documented 2% refusal rate. As 9% of staff did not complete the declaration form we were unable to meet the target.

Improved data management capabilities and more rigorous follow-up of employees that refuse vaccination are strategies that could lead to improved vaccine uptake next season.



# Increasing the Performance Target for Victorian Healthcare Worker Influenza Vaccination Rates: What was the impact?

## Author

Bennett N

## Background

Annual influenza vaccination rates for healthcare workers (HCWs) have historically been below 50% in Australia. In 2014, the Victorian Department of Health introduced a key performance indicator (KPI) for Victorian public health services that increased the target HCW influenza vaccination rate to 75%. Objectives The objectives of our evaluation study were in Victorian public health services to: (i) observe the impact of a new state-wide HCW influenza vaccination target rate (ii) examine the scope of campaign strategies implemented, (iii) examine the resources used to implement campaign strategies, and (iv) describe campaign strategies that are associated with higher HCW influenza vaccination rates.

## Methods

Infection control practitioners in the participating health services were provided with a standardised electronic survey to prospectively record daily vaccine delivery and resources used. An additional survey was used to evaluate campaign strategies implemented. Large (>100 acute beds) and small (<100 acute beds) health services were compared and trends over time were calculated using historical annual vaccination rates.

## Results

The state-wide preliminary HCW influenza vaccination rate (70.6%) was higher than the predicted rate for 2014 (64.4%). On average, health services achieved 50% of their final vaccination rate within 2 weeks and 80% within 4 weeks of commencing their campaigns. Most health services employed strategies relating to core concepts of availability, education, reminders and incentives. Large health services utilised more strategies than smaller health services. Health services who implemented strategies to identify unvaccinated HCWs and increase vaccine availability achieved greater than expected increases to their vaccination rate.

## Conclusions

A state-wide target linked to KPI was demonstrated to be an effective measure to increase HCW influenza vaccination rates in Victorian health services. A diverse range of strategies were employed. Increasing availability and identifying unvaccinated employees were strategies that increased vaccination rates.

# Promoting and Supporting Infection Prevention and Control in Community Settings: A Practical Solution?

## Author

Henderson L

## Background

The Non-acute Infection Control Special Interest Group (NICSIG) is a group of infection prevention and control professionals, and other healthcare workers who have responsibility for infection prevention and control within their role description. The role of NICSIG is to discuss and advise on infection control issues relevant to various non-acute healthcare settings. Membership of this group includes both government and non-government representation. The group identified that education and support from experienced infection prevention and control professionals was an essential component in the non-acute setting, particularly for novice or isolated healthcare workers. To meet this need a training package for Infection Prevention and Control Champions was developed. An Infection Prevention and Control Champion is an identified worker who either has a responsibility for infection control within their role or has expressed an interest in becoming the "champion" for infection prevention and control within their work area.

## Method

A one day workshop was held in March 2014 and facilitated by experienced infection prevention and control professionals from within the acute and non-acute sectors. The aim of the workshop was to provide nominated infection prevention and control champions with a basic introduction to infection control. Prior to the workshop a letter introducing the concept of infection control champions and a role description was provided to members of NICSIG to disseminate throughout their organizations. Attendees were required to demonstrate completion of the Hand Hygiene Australia (HHA) online learning package prior to the workshop, and successfully complete an infection control workbook within 2 weeks of the workshop to obtain a Certificate of Competence.

## Outcome

Forty people participated in the workshop; twenty-six completed all requirements and obtained their Certificate of Competence, thirteen provided the HHA certificate only and three people did not complete either. The feedback was very positive with requests for the workshop to be repeated. Plans for a repeat workshop in 2015 are currently being considered.

# A Sampling of Sharps Safety Device use in UK, USA and Australia - why is Australian usage so low?

## Author

Grimmond T

## Introduction

The incidence of sharps injuries among Australian healthcare workers is estimated to be 5.9 per 100 full time equivalent staff (FTE). Among their USA counterparts the incidence in 2011 was 1.9 per 100 FTE. Many SI from safety-engineered devices (SED) are due to non-activation. Monitoring of activation is recommended. Is the level of safety engineered device (SED) use, or incorrect activation of SED, the reason for the higher incidence in Australia? To answer these questions, sharps container contents were audited in USA, UK and Australia.

## Method

Sharps container contents were decanted under controlled conditions and hollow-bore needles (HBN) were individually counted and categorised into capped and uncapped standard devices and correctly and incorrectly activated safety engineered devices (SED).

## Results

The contents of 128 sharps containers from 52 hospitals in the 3 countries were examined. 14,063 HBN from 1,777 litres of sharps waste were categorised. SED as a percentage of total HBN in USA, UK and Australia samplings was 46%, 50% and 30% respectively. The percentage of SED correctly activated in USA, UK and Australian samplings was 78%, 67% and 81% respectively.

## Discussion

USA and UK have specific SED legislation, so too does France, Italy, Canada and all EU member states; Australia does not. The matter is of such concern it was brought before the Australian Parliament in June 2013. In the USA, cost, by law, cannot be the reason for non-adoption of SED. The political, cultural and legislative forces affecting these results will be discussed.

# **ORAL ABSTRACTS DAY TWO TUESDAY 25 NOVEMBER 2014**

## When do the risks to the patient outweigh the benefits of contact precautions?



### Author

Schweizer M

### Abstract

Contact Precautions are used for the “Greater Good” of a hospital’s patient population. Patients on contact precautions bear the infection control burden without receiving the benefits. Conflicting studies have reported on harms associated with contact precautions including depression, falls and decreased patient satisfaction. This plenary will discuss system-level and patient-level characteristics that lead to situations in which the risks of contact precautions outweigh the benefits, and present the results of recent research into when contact precautions should be discontinued. We will also discuss alternatives to contact precautions.

## Hospital-acquired infections. How do we reach zero?



### Author

Jacobsen D

### Abstract

The challenge of “reaching zero HAI’s” has been addressed and debated in many venues with agreement that “targeting” zero is an important goal in creating the impetus for focus and improvement. The feasibility of “reaching” zero creates a separate and less cohesive dialog.

Efforts to prevent and control HAIs have led to profound changes in the way infections are perceived and managed in the United States and abroad. Programs focused on preventing and controlling HAIs were rare in U.S. hospitals in the early 1970s. Today, they are present in virtually every hospital in the U.S. and in many hospitals abroad.

The U.S. Study on the Effectiveness of Nosocomial Infection Control (SENIC) was a rigorous assessment of infection control effectiveness that compared outcomes in hospitals with and without CDC-style infection control programs (1). The study was designed to determine whether infection control programs using CDC-recommended practices actually reduced the risks from HAIs.

When the study showed that hospitals with infection control programs had significantly lower rates of HAIs than hospitals without such programs (2), expectations for hospital programs changed. With strong scientific evidence supporting the value of such programs, accrediting organizations in the U.S., such as the Joint Commission on Accreditation of Hospitals (now The Joint Commission) mandated that accredited hospitals have infection control programs similar to those recommended by CDC and the professional organizations of hospital epidemiologists and infection control practitioners.

“Reaching Zero” provides an impetus in closing the gap on key HAI’s in support of overall efforts to reduce harm and improve care of increasingly complex patients.

(1) Haley RW, Quade D, Freeman HE, et al. The SENIC project: Study on the Effectiveness of Nosocomial Infection Control (SENIC PROJECT): summary of study design. *Am J Epidemiol* 1980;111:472--85.

(2) Haley RW, Culver DH, White JW, et al. The effectiveness of infection surveillance and control programs in preventing nosocomial infections in US hospitals. *Am J Epidemiol* 1985;121:182--205.

PLENARY 5

## Navigating The “NEW” AS/NZS4187 – how to find what you are looking for

### Author

McAuley T



### Abstract

The public review drafts of AS/NZS4187 released in October 2012 and April 2014 look very different to the Standard we have been working with over the past two decades.

Getting used to this new format might take a while after the next edition of AS/NZS4187 is published, so this presentation aims to assist you to navigate your way through the main sections of the document and hopefully help you find what you are looking for.

# Update on the review of The Australasian Health Facility Guidelines (AusHFG) – Part D Infection Prevention and Control

**Author**  
Smollen P



## Abstract

The AusHFG is a national document that assists project teams in the planning, design, construction and/or refurbishment of healthcare facilities of all types and sizes. Part D of that document address specific elements related to Infection Prevention & Control in construction and refurbishment. This session will outline the new changes to Part D of the AusHFG and provide detail on those changes. It will provide background and rationale on the development of the document and implications for use.

CONCURRENT SESSION 7: CLEANING, DISINFECTION & STERILIZATION IN HEALTHCARE SETTINGS, CONSTRUCTION & RENOVATION & ELIMINATING MICROORGANISMS IN THE HEALTHCARE ENVIRONMENT.



## Water - a source of life or an infection prevention and control headache? Microorganisms in the environment and the challenges.



**Author**  
Henderson B

### **Abstract**

The essential expertise of an infection prevention and control clinician has always encompassed the areas of surveillance, isolation, disease transmission, significant organisms, risk management, staff health, education, and research. In recent times this has been extended and we are now expected to have an understanding of terminology such as S-bends, flow rates, reverse osmosis, cooling towers, dead legs, carbon, chlorine, softeners, and hardeners. You may ask yourself have we become water technicians and what role do we actually play?

Supply water is not sterile; we know that bacteria grow in water systems. Processes designed to minimise or eliminate microorganisms in the healthcare environment include routine cleaning, disinfection, sterilisation and monitoring for water borne pathogens. The experience and challenges of a large infection control program will be discussed in response to decreased water quality, the impact on high level disinfection systems, and the isolation of *legionella pneumophila* in the potable water reticulation system of a hospital in Brisbane. The clinical impact and infrastructure requirements will be described.

# Controlling methicillin-resistant *Staphylococcus aureus* (MRSA) in a hospital and the role of hydrogen peroxide decontamination



## Authors

Mitchell BG, Digney W, Locket P, Dancer SJ

## Objectives

The impact of surface disinfection versus detergent cleaning on healthcare associated infection rates remains unresolved. We aimed to evaluate the efficacy of hydrogen peroxide (HP) decontamination against methicillin-resistant *Staphylococcus aureus* (MRSA).

## Design

Single centred retrospective before and after study design was undertaken at the Launceston General Hospital, Tasmania, Australia.

## Participants

Patients with MRSA infection or colonisation.

## Interventions

Rooms occupied by patients with MRSA infection or colonisation were cleaned following discharge with either detergent or HP.

Main outcome measures: MRSA room contamination following cleaning; new MRSA acquisition in patients.

## Results

Over 3600 discharge cleans were completed, with more than 32 600 environmental swabs processed. MRSA was isolated from 24.7% rooms following detergent cleaning and from 18.8% of rooms after HP ( $p < 0.001$ ). The incidence of MRSA acquisition reduced from 9.0 to 5.3 per 10 000 patient days in detergent and disinfectant arms, respectively ( $p < 0.001$ ).

## Conclusions

Use of HP disinfection led to a decrease in residual MRSA contamination in patient rooms compared with detergent. It may also have encouraged the reduction in patient MRSA acquisition despite several confounders including staff feedback on terminal cleaning, additional MRSA screening and quicker laboratory methods. Infection control is best served by concurrent interventions targeting both the patient and healthcare environment.

## Infection Prevention and control in endoscopy – isn't it time to get it right?



### Author

McAuley T

### Abstract

Over the past decade there have been some notable cases in which infection control breaches have occurred in endoscopy settings. Whilst the reported breaches may not have resulted in high numbers of patient infections, the anxiety created for hundreds and sometimes thousands of patients who have received notification and undergone testing cannot be understated.

In some cases, breaches were associated with improper anaesthetic practices; however it is widely accepted that lack of compliance with manufacturer's reprocessing instructions and/or published guidance documents make up a large proportion of reported events. With the number of endoscopic procedures undertaken globally continuing to rise, isn't it time we got it right?

## VRE – Game Of Clones

### Authors

Mahony AA<sup>1,2</sup>, Grabsch EA<sup>3</sup>, Ballard SA<sup>1</sup>, Xie S<sup>3</sup>, Wang J<sup>3</sup>, Roberts SA<sup>4</sup>, Heffernan H<sup>5</sup>, Stuart RL<sup>6</sup>, Cotsanas D<sup>6</sup>, Cheng A<sup>7</sup>, Bak N<sup>8</sup>, Seemann T<sup>9</sup>, Stinear TP<sup>10,11</sup>, Lam MMC<sup>10</sup>, Coombs GW<sup>12</sup>, Howden BP<sup>1,3,10,13</sup>, Grayson ML<sup>1,2,3</sup>, Johnson PDR<sup>1,2,12</sup>



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- 12 – Australian Collaborating Centre for Enterococcus and Staphylococcus Species (ACCESS) Typing and Research, School of Biomedical Sciences, Curtin University, Perth, Western Australia, Australia
- 13 – Microbiological Diagnostic Unit, Peter Doherty Institute, University of Melbourne, Vic, Australia

### Background

Vancomycin-resistant *Enterococcus faecium* (VREfm) continues to arise and spread within healthcare facilities despite widespread implementation of hand hygiene programs and infection control measures, leading some institutions to relax their surveillance and/or isolation protocols. We aimed to compare recent Australasian VREfm outbreaks to better understand the clonality, origin and extent of current strains.

### Methods

Five tertiary hospitals across south-eastern Australia and New Zealand compared recent (2012-2014) outbreak *vanB* VREfm isolates using whole genome sequencing (WGS) following traditional Infection Control based epidemiologic investigation +/- pulsed field gel electrophoresis typing (PFGE). Antibigram data were gathered for invasive isolates using standard methods.

### Results

A new VREfm type, designated sequence type 796 (ST796) on multilocus sequence typing, was discovered in all five hospitals with a highly conserved core genome (~100 single nucleotide polymorphisms across the strains). Rectal colonisation was the most commonly observed form of infection, with bacteraemia occurring at two Melbourne sites (21 cases). Variable high-level gentamicin resistance was found in invasive isolates, in contrast to streptomycin. Importations of ST796 into New Zealand likely arose through international patient transfers from Melbourne, with one patient found to be co-infected with the precedent ST203 dominant strain. Outbreaks occurred in settings with relatively good pre-existing hand hygiene compliance (range 65-85%) amongst healthcare workers.

### Conclusions

ST796 VREfm poses a new threat in nosocomial infection and appears to be readily transmissible from colonised to susceptible patients. WGS of geographically widespread VREfm isolates suggests a common source of this clone, with Melbourne the presumed epicentre. Further study into the origins of new VRE clones may guide future control measures.

## Challenges with TB management in the Northern Adelaide Local Health Network.



### Author

Byron-Gray K

### Abstract

The Lyell McEwin Hospital (LMH) is a 336 inpatient bed Type 1 tertiary acute care facility located in Northern Adelaide, South Australia. It is one of two hospitals that make up the Northern Adelaide Local Health Network providing a range of acute and sub-acute health services for a rapidly growing population. The LMH also provides a busy Hospital-at-Home and Home Visiting Midwifery Service and has multiple Northern Mental Health campuses and sites and Indigenous Health services under its banner.

The Lyell McEwin is now considered a high risk facility for cases of TB with increased migrant settlement in the North. Cases of suspected and confirmed TB have been increasing over the past three years which has been one of the driving factors behind recent business cases to improve services such as Infection Prevention and Control and to emphasise the importance of having a dedicated Clinical Work Health and Safety Staff Health Service and program.

In the last 12 months there have been improvements made in funding and resourcing of important services such as Clinical Work Health and Safety Staff Health; Respiratory Services and an increase in Infectious Disease consultants and Infection Prevention and Control practitioners.

The Infection Prevention and Control Service (IPCS) has been involved in many quality improvement activities across both hospital sites including the development of policies and procedures, provision of targeted education and training regarding airborne disease, importance of teaching staff fit-checking N95/P2 masks in the absence of a fit-testing service and program.

A further quality improvement for the NALHN is the design and construction of a Bronchoscopy Suite at the LMH which means that patients will require less inter-hospital transfer for diagnostic purposes. The LMH has also recently built a new 96 bed wing with a single room/ensuite model which has additional Class N5 negative pressure rooms with ante chambers giving the hospital scope for management of patients with new emerging novel respiratory pathogens if the need arises.

This presentation will outline the quality improvements that have occurred over the last few years and the challenges still faced in the North and include some patient scenarios.

# Screening and other non-infectious issues in new migrants to Australia



**Author**  
Benson J

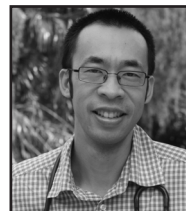
## Abstract

Australia's newly arrived migrants often present with a different health profile and come from areas with less access to health infrastructure than the rest of the Australian population. This is particularly true for those who come from developing countries where there is a high burden of endemic infectious diseases, parasites and nutritional deficiencies. Some of these may present a public health risk, some risks of acute infection or illness, but many are asymptomatic or subclinical on arrival but carry a risk of future morbidity or mortality if left untreated.

Screening new migrants for acute infectious diseases, chronic infectious diseases, nutritional deficiencies, chronic illness or mental health problems involves a knowledge of the burden of disease in the country of origin, and the social determinants of health in the country of origin and in Australia. Health professionals also need a more specialized understanding of how to test and treat illnesses that are uncommon in their usual patients.

The Migrant Health Service in Adelaide is a State-funded multi-disciplinary primary health care service, which sees newly arrived refugees in the first 12 months after arrival. General Practitioners and highly specialized Clinical nurses screen all refugees soon after arrival. An outline of the screening protocols used at the Migrant Health Service, and some of the infectious diseases, parasites and nutritional deficiencies seen on a day-to-day basis will be discussed.

## CA-MRSA in and from Aboriginal populations.



### Author

Tong S

### Abstract

Community-associated MRSA is a globally prevalent epidemic. Less well appreciated is that CA-MRSA was first described in Indigenous populations in Australia and also the US. I will describe the rise of CA-MRSA in Australia, with a particular emphasis on CA-MRSA in Indigenous populations. Differences in the epidemiology of staphylococcal infections in Indigenous compared to non-Indigenous populations will be elucidated. Strategies to combat the spread of CA-MRSA will need to be different from traditional infection control strategies, and require an emphasis on addressing the primary drivers of the emergence of CA-MRSA from Indigenous populations.

# Bad design, bad practices & bad bugs

## Author

Salmon S



## Background

*Elizabethkingia meningoseptica* is a nosocomial-adapted, gram negative bacillus with intrinsic resistance to most antibiotics. In August 2012, three patients developed *Elizabethkingia meningoseptica* bacteremia within a two week period in the Cardiothoracic Intensive Care Unit (CT-ICU) at National University Hospital.

## Methods

An outbreak investigation was triggered including analysis of laboratory data, case reviews, investigation of workflows within the ICU and extensive environmental sampling. Molecular typing of selected patient and environmental isolates was performed using Rep-PCR.

## Results

Laboratory data revealed an increasing trend of *E. meningoseptica* clinical infections in ICUs. Two concurrent cases were identified in the Surgical ICU (SICU). Typing revealed similar strains in some patient and environmental isolates. Investigation of ICU nursing practice revealed introduction of non-sanctioned practices regarding disposal of patient body fluids and cleaning of patient equipment in designated hand hygiene sinks within patient rooms. These non-sanctioned practices were immediately stopped. *Elizabethkingia meningoseptica* was cultured from aerators of 44% (35/79) taps. Sinks frequently used for non-sanctioned practices were more likely to be contaminated (95% CI 1.2-3.3,  $p < 0.003$ ). *Elizabethkingia* was not cultured from any other surfaces within patient rooms. Rooms underwent terminal cleaning. Faucets were systematically cleaned and aerators were changed. No further cases occurred in SICU or CT-ICU over the following three months. One month after aerator change, aerators remained free of *Elizabethkingia meningoseptica*.

## Conclusion

Introduction of non-sanctioned practices due to suboptimal unit design may have unintended consequences for vulnerable patients. Nursing workflows must also be practical to ensure proper waste disposal and cleaning of medical equipment.



## Outbreaks in residential care facilities – Lessons Learned.



**Author**  
Reilly M

### Abstract

Residential care facilities (RCF) provide an environment that is conducive to outbreaks of infection with such organisms as *Staphylococcus aureus*, Group A *Streptococcus*, *Escherichia coli* 0157:H7, *Salmonella* spp., *Mycobacterium tuberculosis*, *Clostridium difficile*, rotavirus, norovirus, influenza virus A and B, parainfluenza, respiratory syncytial virus, *Sarcoptes scabiei* and viral conjunctivitis. In addition, multi-drug resistant organisms (MRO) such as methicillin-resistant *Staphylococcus aureus* (MRSA), vancomycin-resistant enterococci (VRE), drug-resistant *Streptococcus pneumoniae*, and multi-drug resistant gram negative bacteria are increasingly important causes of colonisation and infection which can lead to outbreaks. These outbreaks underscore the vulnerability of susceptible residents to infection. In addition to host risk factors, the physical, microbiological and social environment influence the risk of infection. Resident's sharing of space and engagement in activities in a semi-confined often under-resourced home-like environment brings them into daily contact with one another. Physical contact is frequent among residents, staff and visitors, allowing easy spread of organisms by direct/indirect contact, droplet and airborne transmission. Outbreaks have been associated with increased morbidity, mortality, and cost, although this has not yet been fully defined in the Australian context. They create a number of challenges and as a result lessons are learned. These include the necessity for multidisciplinary teamwork and communication; early detection and notification, mutual understanding and respect of public health and RCF roles, responsibilities and requirements; appropriate selection and correct use of hand hygiene agents and personal protective equipment, access to correct specimen collection equipment; maximised employee/volunteer and resident influenza and pneumococcal vaccine coverage; prompt access to antiviral prophylaxis and treatment, appropriate cleaning methodology including selection of disinfectants; and realisation of the impact of physical/social isolation on residents and their families. This paper will explore some of these lessons learned through the experience of the author.

### Disclosure of Interest

Hands-On Infection Control is a private business providing consultancy, education and immunisation services to healthcare and related clients.

## South Australian surveillance of multi-resistant Gram-negative infections – analysis of trends and implications for infection control



**Author**  
Wilkinson I

### Abstract

South Australia has been conducting state-wide surveillance on a number of targeted multi-resistant organisms since 2003. The targeted resistances include: MRSA, VRSA/VISA, VRE, ESBL, MBL, CRE, and MR-PAER. Only healthcare associated new acquisitions are included in the data collection, and these are sub-categorised into colonisation or infection. The definitions used for surveillance were established in 2003 and have remained unchanged, thus enabling valid longitudinal analysis of trends. Data have been collected since 2003 from 17 SA metropolitan hospitals including 8 public and 9 private, and from 7 larger country hospitals since 2010.

Over the ten-year period the incidence of infection with MRSA has declined steadily whilst the overall incidence of infection with multi-resistant Gram-negatives (MRGN) has increased to the point where these are now more common. Significant trends have also been observed amongst the different MRGN, including a steady increase in the number of infections caused by ESBL-producers. In contrast, the incidence of infection with multi-resistant *Ps. aeruginosa* has remained fairly stable. The incidence of CRE in South Australian hospitals remains very low at present.

Several factors may impact on the interpretation of MRGN surveillance data, including the sensitivity and specificity of laboratory testing methods. Over the ten years there have been some changes in methodology that have had mixed effects on the data. In general, taking this into account, the increased incidence seen for ESBL in particular is probably real and is in line with trends seen both nationally and internationally.

The observed increased incidence of multiple resistances amongst Gram-negative organisms has implications for both empiric treatment of serious infection and for infection prevention. Most hospitals do not currently have active screening programs for the detection of MRGN carriage, even though the Australian Commission for Safety & Quality in Health Care has recently published guidance for the control of CRE. One of the biggest barriers to implementation of the recommendations in this guideline is the reliable recognition of patients with risk factors for CRE carriage. Most hospitals do not have systems to automatically alert when patients present with a relevant exposure history, although this would be highly desirable.

## Antibiotic stewardship in the private healthcare setting

### Author

Marshall C



### Abstract

Having an antimicrobial stewardship program in place is now a mandatory accreditation requirement for all hospitals in Australia since the introduction of new national healthcare standards in 2013. The public healthcare system has thus been very active in introducing such programs and there is much research and many recommendations to guide this. Implementation in the private hospital system, however, has lagged behind, with little if any research available for guidance. The reasons for this are unclear and may result from the differences in the way healthcare is delivered in the private sector. Our group has performed qualitative research into the knowledge of and attitudes towards antimicrobial resistance and antimicrobial stewardship, as well as the cultural factors and barriers affecting introduction of an antimicrobial stewardship program into a large private hospital. These results will be discussed and recommendations for introducing an antimicrobial stewardship program into the private hospital sector will be made.

## Surveyor feedback following accreditation utilising the National Safety and Quality Health Service (NSQHS) Standards, Standard 3 - Preventing and Controlling Healthcare Associated Infections.



**Author**  
Greig S

### **Abstract**

Following the implementation of the National Safety and Quality Health Service Standards in 2013, the Commission is now undertaking evaluation of the data available from the first 12 months.

As part of this evaluation the Commission is looking at areas in Standard 3 where organisations have performed well as well as areas where further improvement is required. Some of the areas identified where organisations have performed well include governance, hand hygiene, aseptic technique, AMS, and environmental cleaning. Areas where further improvement is required include governance, aseptic technique, AMS, environmental cleaning and engaging with consumers.

As part of this review the Commission is also evaluating surveyor feedback to organisations to identify possible areas for improvement.

## Clinical Applications Of Infection Prevention And Control In Residential Age Care – Gastroenteritis Outbreak And Educational Challenges



**Author**  
Jain S

### Abstract

Outbreaks of gastroenteritis are common in residential aged care (RAC) and are associated with increased hospitalisation and mortality. Norovirus is the leading cause of gastroenteritis in RACs and is readily transmitted from person-to-person. Communal living in RAC increases contact between people and also the risk of transmission, especially when residents have difficulties with activities of daily living. The common symptoms of gastroenteritis include diarrhoea, vomiting, nausea, stomach cramps, fever, headache and muscle aches. Viral gastroenteritis is highly infectious and can be spread by contaminated hands or / aerosolised when a person vomits or acquired by swallowing contaminated food or drink. People are generally considered to be infectious for at least 48 hours after their symptoms have ceased, the elderly may be infectious for a longer period. Identifying the cause of the gastroenteritis is important to differentiate food borne pathogen or from non-infectious diarrhoea due to the use of laxatives.

Ideally patients should be nursed in a single room with adjoining bathroom facilities. However, most facilities struggle to find a single room with ensuite due to limited number of available single rooms especially in emergency departments. Our facility successfully managed an outbreak considering the above mentioned limitations by isolation and cohorting infected or contact patients, restriction on admission or transfer to affected wards as well as wards closure for the entire duration. We learned that thorough hand hygiene before and after patient contact and appropriate use of PPE reduced the spread of infection. Staff education, closure of common areas and visitor restriction was also implemented during this period. Meticulous environmental cleaning and disinfection as well as appropriate management of linen also played an important role in the control of Norovirus outbreak. Timely communication between public health, management and all disciplinarians of healthcare group is extremely important to facilitate effective management and control of viral gastroenteritis.

## Prevention is the new standard. Your vision, how can we make the most of it?



### Author

Cruickshank M

### Abstract

Since 2007, the HAI team at the Australian Commission of Safety and Quality in Health Care has been leading and coordinating national programs to prevent infections and antimicrobial resistance. Many of these initiatives have been embedded and should be sustained due to the implementation of the National Safety and Quality Health Service Standards – in particular Standard 3 – Preventing and controlling HAI.

This paper will explore the next round of challenges for national HAI and how we can continue our collaboration to improve patient outcomes and experiences.

PLENARY 6 – JOINT ACIPC & ACSQHC PLENARY SESSION

## Reducing Joint SSIs – An update on the IHI project joints.

### Author

Jacobsen D



### Abstract

Reduction of surgical site infections (SSI) is an important and timely goal for the field of orthopaedic surgery and the medical community in general.

The time from when it is known that new treatments are effective to their widespread use in United States (US) health care remains frustratingly long and may result in patients receiving suboptimal quality of care. The Institute for Healthcare Improvement (IHI) developed a Rapid Spread Network (RSN), a multi-modal network, aimed at increasing the widespread adoption of effective practices.

Project Joints (Joining Organizations IN Tackling SSIs) tested the hypothesis that activation of the IHI RSN would lead to increased adoption of the Enhanced SSI Prevention Bundle in arthroplastic hip and knee surgeries – high-volume, high-cost procedures in which infection is a devastating complication. The IHI activated the RSN in five US states initially, and six months later in another five states in an effort to accelerate widespread adoption of the enhanced surgical site infection prevention bundle in total hip or knee replacement surgery:

- preoperative bathing or showering with chlorhexidine
- preoperative nasal screening for *Staphylococcus aureus* carriage followed by decolonization of *S. aureus* carriers
- preoperative skin preparation with a long-acting antiseptic agent in combination with alcohol.

Most US hospitals have made considerable progress over the past several years in implementing precautions to reduce surgical site infections. The Project JOINTS approach to SSI prophylaxis for hip and knee surgeries represents an important, evidence-based step that hospitals can take toward further reducing the institutional, financial, and personal risks associated with these very serious infections.

# Interventions to reduce surgical site infections following caesarean section.

## Author

Gardiner T

## Abstract

Healthcare associated infections are thought to affect 200 000 patients annually, Surgical site infections (SSI) are the most common cause of these HAI.. Surveillance identified an unacceptably high incidence of SSI in post caesarean section patients at Royal Darwin Hospital. A retrospective analysis of identified SSI for risk factors and practices was conducted/ the second stage included monitoring every woman undergoing caesarean section using a data collection tool with well documented risk factors. This presentation discusses the strategies and ongoing management to continue a positive patient safety outcome.

CONCURRENT SESSION 10: SURGICAL SITE INFECTIONS



## The High and Low Tides Of Surgical Site Infection

### Authors

Lorenz H, Goodhand V



### Introduction

To the average health care worker, Infection Control Practitioners (ICPs) might be seen as rule enforcers or data collectors. In reality, ICPS comprise the tsunami early warning system of the hospital – alert to risks, early warning signs, and prepared to implement disaster prevention and control. Routine auditing happens on a regular basis, but ICPs are alert, creative and innovative, as well as adept at forging partnerships and pushing for change as new evidence drives improvement in practice.

### Conclusion

This session will inspire ICPs to review and expand Surgical Site Surveillance. Examples of ICP work in relation to various surgical procedures will be discussed.

# Managing outbreaks in the neonatal and Pediatric setting.

## Author

Stuart R



## Abstract

Neonates represent a unique and highly vulnerable patient population.

Preventing healthcare-associated infections in the neonatal intensive care incorporates a number of areas that will be discussed in this presentation including:

- Optimal infection control practices for healthcare workers and parents
- Prudent use of invasive interventions
- Judicious use of antimicrobials
- Use of molecular epidemiology to define and manage outbreaks in this setting

# Pandemic Influenza: Opportunity To Improve Patient Management Through Hospital Design

## Author

Scott S<sup>1</sup> King S<sup>1</sup>, Butcher T<sup>1</sup>, Daley A<sup>2</sup>

1 Infection Prevention and Control, Royal Children's Hospital

2 Microbiology Department, Royal Children's Hospital

## Background

The Royal children's Hospital, Melbourne is a tertiary referral hospital which has over 75,000 Emergency Department presentations per annum. The Emergency Department has experienced increased activity during periods of seasonal and pandemic influenza outbreaks.

In 2009 during the H1N1 pandemic an additional 120 patients were presenting daily. Of the laboratory confirmed cases 54% were admitted and 4% were hospital acquired. The design for a new facility on adjacent park land, provided an opportunity to implement environmental controls to improve patient management and flow whilst reducing the potential for transmission to other patients and staff.

## Aim

To describe the measures undertaken in the planning of a new hospital to improve pandemic influenza management.

## Methods

The Infection Prevention and Control team participated in the new hospital design focus groups recommending facilities to manage increased presentations and inpatient admissions during seasonal and pandemic influenza outbreaks.

This provided opportunities to influence negative pressure room and pandemic ward design, air flows and patient pathways.

In preparation for the new site, practices and procedures, including the application of transmission based precautions, were reviewed and resources developed for staff to manage in a new facility.

The procedure for pandemic influenza patient management was revised to include patient placement aligned with the phases of a pandemic and the implementation of 'pandemic mode' air flows to manage patient flow in the Emergency Department.

## Results

The new RCH has increased capacity to manage pandemic influenza patients with underlying illness in the appropriate specialty ward as well as providing a designated 'flu' ward for increased admissions. Controlled negative pressure air flows in the Emergency Department waiting areas can be activated during a pandemic to segregate non-infectious patients and visitors, thus reducing the risk of transmission.

## Disclosure of interest statement

The authors have no conflicts to declare and no funding was received by the authors in connection to the work presented.

## CMV in the NICU

### Author

Cooper C



### Abstract

A cluster of 3 cases of post-natally acquired CMV infection in a NICU will be briefly described. This will lead into a discussion of possible sources and current strategies to prevent CMV transmission within NICUs.

# The NSW Sepsis Kills Program

## Author

Burrell T



## Introduction

In NSW, failure to recognize and treat sepsis has been reported regularly. Since 2011 the Clinical Excellence Commission has conducted the 'SEPSIS KILLS' awareness program in the state's hospitals.

## Method

Early recognition, fluid resuscitation, intravenous antibiotics within one hour and senior clinician involvement has been stressed. Sepsis pathways (adult and paediatric) and empiric antibiotic prescribing/administration guidelines were promoted. An online database for recording time to antibiotics/fluids was developed.

## Results

At the end of 2013 data has been collected on 13,567 emergency department patients. In 2009-11 29.1% patients received antibiotics within 60mins, by 2013 the rate had improved significantly to 52.2% ( $P < 0.0001$ ). In 2013 patients were 3.3 times more likely to start a second litre within 60mins. ( $P < 0.0001$ )

The overall mortality was 8.5%. There were 2011 patients with severe sepsis (total 7252 with known BP 90 and/or lactate 4 and year). 31.2% (628) were admitted to ICU with a reduction over time in ICU mortality to 15.8% in 2013 (NS).

Worryingly there was a significant decline in patients with severe sepsis being admitted to ICU ( $P = 0.01$ ). The causes are not clear but could include an under appreciation of potential mortality, the progressive nature of the inflammatory process and the significance of lactate. The remainder (1383) was managed on the ward with an overall mortality in excess of 20% which did not change over time.

## Discussion

While there has been an improvement in the process of managing sepsis in ED and the outcomes in ICU are very good, the management of severe sepsis on the ward remains problematic. It is estimated that 30% of deteriorating patients are septic, that antibiotics and fluid resuscitation are often delayed and the Rapid Response calls are common. Management of these patients needs to consider the deteriorating patient program, antimicrobial stewardship, supervision and partnering with patients. The program was rolled out to the wards in the larger NSW hospitals in May 2014. Hospitals are being asked to ensure that they promote the sepsis pathway, have a 48 hour management plan and have an agreed number of 'triggers' for calling a senior clinician.

# Emerging viral threats – An update on MERS CoV and implications for infection control

## Author

Playford G

## Abstract

Aside from the recent Ebola virus disease outbreak in West Africa, there remains many other emerging and re-emerging viral threats, including MERS CoV, Henipaviruses, lyssaviruses, measles virus, and avian and pandemic influenza viruses. This talk will scan the horizon for such emerging viral threats and highlight the associated clinical, infection control, and policy implications faced by Australia.

CONCURRENT SESSION 12: THE ICU & DEVICE RELATED INFECTIONS & EMERGING INFECTIONS  
WITH INFECTION CONTROL IMPLICATIONS.

## Infections in intra-vascular devices: risk factors and interventions



**Author**  
Salmon S

### Abstract

Modern medicine relies on the use of intravascular devices to provide access for treatment. Their use puts patients at risk for local and systemic infectious complications. The incidence of intravascular device bloodstream infections (BSIs) varies considerably due to device type, frequency of catheter manipulation and other patient-related issues. Peripheral venous catheters are devices most frequently used for vascular access. Although the incidence of local or blood stream infections associated with peripheral venous catheters is usually low, serious infectious complications produce considerable annual morbidity because of the frequency with which such catheters are used. Understanding the risk factors associated with intra-vascular device associated BSIs can assist with designing a multiple-approach prevention strategy, targeted at the insertion and maintenance of vascular access. Decreasing rates of vascular-access infections can have a substantial impact on the overall incidence of intra-vascular device associated infections, length of hospitalisation, health care costs and associated infection related morbidity.

# Strategies to Prevent and Treat *S. aureus* Infections: Decolonization in High-Risk Patient Populations and Targeted Antibiotic Use



**Author**  
Schweizer M

## Abstract

Methicillin-resistant *S. aureus* and methicillin-susceptible *S. aureus* infections can be found in nearly every hospital in the world, and are associated with high morbidity, mortality and costs. However, the antimicrobials used to prevent and treat *S. aureus* (e.g., mupirocin, chlorhexidine, vancomycin and newer antibiotics) need to be used with caution so widespread resistance does not develop. In this plenary we will discuss the evidence for using these antimicrobials in many patient populations including surgical patients, intensive care unit patients and dialysis patients. We will also discuss targeted versus universal decolonization strategies in these patient populations.

PLENARY 7



## Nurses and antimicrobial prescribing: embedding antimicrobial stewardship into everyday practice



**Author**  
Warner M

### Abstract

In the current era of growing antibiotic resistance and limited therapeutic options to treat serious infections, it is increasingly important that antibiotics are appropriately prescribed. Antimicrobial stewardship (AMS) interventions and education have generally targeted doctors and pharmacists, but nurses also play a crucial role in ensuring quality prescribing and administration of antimicrobials.

In the hospital setting, key everyday roles of nursing staff support AMS. These include documenting patient allergies and colonisation with multi-resistant organisms, both of which may affect empirical antimicrobial choice. Accurate recording of patient weight and height informs appropriate dosing of antimicrobials. Nurses are primarily responsible for administering drugs and therefore could assist in improving documentation of indication for antimicrobials and also support IV to oral switch decisions. Prompt antibiotic therapy is critical in deteriorating septic patients and nurses have an essential role in reducing time from prescription to administration of antimicrobials.

In aged care facilities and in the general practice setting, nurses may be the “first responders” in AMS decision-making by prompting microbiological testing or flagging possible infections to doctors who may not yet have seen a patient. Educational efforts to support nurses’ knowledge about conditions in which antibiotics are not usually required (e.g. chronic leg ulcers, asymptomatic bacteriuria, upper respiratory infections) could be an important component in reducing inappropriate antibiotic use.

Effective antimicrobial stewardship requires a multidisciplinary approach and is most effective when it is integrated into everyday practice. This will be facilitated by increased recognition and enhancement of the nursing contribution to AMS activities.

# Preventing cross infection through a novel multi bed ward design

**Author**  
Barratt R



## Abstract

Infection prevention and control consultation is an essential and important component of healthcare facility design. Single rooms are preferable to minimise the transmission of infection to others. However not all clinical staff favour single rooms over multi bed rooms which presents challenges for the IPC team.

This session describes the IPC journey through the design phase of a new acute surgical services hospital block in which the provision of an adequate number of single rooms posed a significant challenge. A unique four bed ward design was developed which focuses on patient and family centered models of care, incorporating the principles of Maori culture, patient safety, privacy, and dignity. IPC isolation principles are upheld as a component of patient safety in the distinctive design.

## Clostridium diff cile – Infection Control Challenges – Now and in the Future



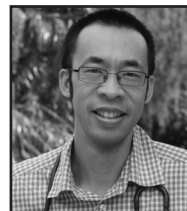
**Author**  
Stuart R

### Abstract

Since 2000 there has been an increase in the rates of *Clostridium diff cile* infection (CDI) in many healthcare facilities around the globe. All healthcare services should have in place an optimal evidence-based program for CDI prevention and control.

In this presentation an update on the infection control of CDI will be presented, including the role of the Antimicrobial Stewardship Team, the value of using molecular typing to understand transmission and new methods available for environmental cleaning for CDI.

## A genomic framework to understanding transmission of *Clostridium difficile*, MRSA, VRE & CRE



### Author

Tong S

### Abstract

Genomic studies have recently been completed on key nosocomial pathogens. Somewhat surprisingly, the underlying molecular epidemiology and transmission dynamics of the bacterial pathogens *Clostridium difficile*, methicillin-resistant *S. aureus*, vancomycin-resistant enterococci, and carbapenem-resistant enterobacteriaceae, have been found to differ from one another. These insights suggest that effective infection control strategies targeted at any one of these pathogens may not be as effective against the other pathogens.

## Can social media be used effectively to promote infection prevention and motivate health care workers?



**Author**  
Bass P

### Abstract

Use of social media is becoming a growing trend throughout the world and although it is starting to be used in Healthcare, the uptake and application of social media within the Australian healthcare setting is yet to flourish compared to other industries.

Social media can provide us with opportunities for education and communication of both patients and staff, community outreach, health promotion, possibilities for public health surveillance and the potential to influence health policy as seen with the UK NHS reform in 2011.

The dynamic mix of social media platforms that are available allow opinion to be shared widely and allows 'grass root voices' to be heard, within a non-hierarchical domain.

Feedback and education to patients and staff can be timely, foster discussion and collaboration between groups and raise awareness of important issues that emerge. Sites such as PatientsLikeMe, the Twitter journal club and the Infection Prevention Society Twitter page allow networking, engagement and education with an ultimate goal of improving healthcare outcomes.

Organisationally, social media can allow us to increase our visibility and improve our overall image. Organisations need to have a social media policy and strategy to move forward in this field. The integration of information from social media requires a coordinated approach in order to connect meaningfully with their audience to provide value and increase trust.

Social media is a powerful tool that can be used to influence and promote change. It has the potential to raise the expectations of our consumers as personal stories and experiences are shared and to give the consumer a voice. The health sector has been slow to embrace social media but the benefits are beginning to emerge and through listening and engaging with our consumers and our workforce we will be able to respond and transform the way we practice in healthcare.

# Credentialing and Competency: Future Considerations for Australasian Infection Control Professionals.



## Author

Shaban RZ<sup>1,2</sup>

## Affiliations

(1) Australasian College for Infection Prevention and Control

(2) Centre for Health Practice Innovation, Griffith Health Institute, Griffith University.

## Abstract

Credentialing is a self-regulatory process instituted by an appropriate professional body, the College, to determine and acknowledge that an individual has demonstrated the prescribed competence of a relevant specialist practice role. It designates their specialist or advanced expertise, informs consumers, establishes a national standard, promotes career advancement, identifies a community of experts, contributes to qualifications for independent practice and enhances the quality of contemporary healthcare.

Credentialed infection control practitioners are at the forefront of quality and safety in health care, leading and guiding healthcare workers, patients and the community on best-practice, evidence-based care. The credibility of their practice is judged against an established standard, so that healthcare workers, administrators and consumers alike can be confident the practitioner they consult is able to provide appropriate advice. Their credential is based on independent peer assessment of a portfolio of evidence demonstrating expertise and excellence in professional practice. Core to ACIPIC Credentialing has been and is the emphasis on specialist tertiary infection control qualifications in infection prevention and control, the maintenance of professional standards of practice and the contribution to knowledge generation and translation.

Credentialing of Australian infection control practitioners began in the 2000. Now in 2014, more than a decade on, there are over 70 credentialed ACIPIC credentialed infection control practitioners working globally. This seminar will explore the natural history of ACIPIC Credentialing, examine the current processes and standards, and charter future challenges for credentialing as the measure of professional standing of Australasian infection control practitioners. It will detail what is known and the critical knowledge gaps and methodological limitations of existing research, overview new research to better evaluate and demonstrate the effect and influence of credentialing, flag emergent research priorities, and broker strategies to sustain credentialing into the future.

## The top 3 infection control initiatives that can be enhanced by partnering with consumers



### Author

Potter M

### Abstract

There is an increasing focus on every person involved in a patient's health journey working as a health team. For any team to be successful, each member must fulfil their role. To do this, each member must understand clearly what their role is. They also need to communicate with one another in a clear and timely manner.

The patient is an integral part of the health team. However, to fully play their part they must understand their role, and be able to communicate. This presentation will look at ways in which this team partnership can be enhanced.

# Understanding behavior in order to implement change



## Author

McLaws M

## Abstract

Healthcare workers are good people who want to do good work so why do so many resist adopting new behaviour? The modelling of behaviour and factors associated with change is complex. Our model identified major influential factors associated with hand hygiene that included knowledge, attitudes, effort, social normative behaviour within our community and pressure from our peers. To assist healthcare workers to comply with hand hygiene guidelines, programs worldwide have addressed most of these factors: clinicians are now more aware infection prevention through hand hygiene, clinicians know when and how to hand hygiene, their perception about the effort associated with hand hygiene has been removed with the provision of alcohol based hand rub at point-of-care, social norms include clinicians performing hand hygiene, and they understand that their clinical leaders and managers expect them to comply and assist the hospital to pass the hand hygiene audits for accreditation. With these barriers addressed and the use of overt hand hygiene auditing which should result in healthcare workers complying 100% of the time they are watched – this has not resulted in 100% compliance. So what is missing? I will present some of the work we are undertaking on addressing systems failures within a healthcare system and how we are working with the difference between medical and nursing team behaviour and replacing out-dated clinical leadership choices to tip behaviour change.

CONCURRENT SESSION 14: UNDERSTANDING BEHAVIOR IN ORDER TO IMPLEMENT CHANGE/EDUCATION/PROFESSIONAL DEVELOPMENT/PUBLIC HEALTH



## Healthcare workers with Cystic f brosis – Infection Control Guidelines



**Author**  
Stuart R

### Abstract

Cystic f brosis (CF) is the most common lethal genetic condition in Caucasians and affects ~3250 people in Australia and ~450 in New Zealand. Improvements in survival have increased the median age of the CF population with the proportion of those greater than 18 years of age approaching 50% in Australia and New Zealand.

The numbers of adults with CF studying and pursuing vocations is also increasing. In Australia more than two third of adults with CF are undertaking paid employment and a signif cant minority are continuing to study. An observational study from the UK published in 2001 has reported 6.6% of the British adult CF population working in the health care setting. Similar proportions are seen in two large Australian CF centres (6 and 7% respectively).

Evidence of adverse clinical outcomes for the Healthcare Worker (HCW) with CF is limited and similarly, adverse impact on patients cared for by HCW with CF has not been reported. Despite this lack of evidence, there are signif cant theoretical risks both for the HCW with CF and their patients.

To date, guidelines in Australia and New Zealand for HCW with CF have not been developed. New guidelines are in development and will be discussed at this meeting. These guidelines seek to evaluate the evidence for decision making for the HCW with CF including those in training, and provide a structure for informed decision making which considers the personal rights of the individual with CF, the patient, the education institution and the health care service.

## A Doctor's Experience from the other side of the Bed – The Importance of Hand Hygiene.



**Author**  
Guerra G

### **Abstract**

Many of us that work in health care can't imagine the impact of being a patient on the 'other side of the bed.' Rarely do we hear about the personal experience that a hospital admission and Hospital Acquired Infection (HAI) can have on a patient and their family. Sharing such a story can leave a lasting impression on the audience, and be a powerful tool to inspire cultural change and motivate Health Care Workers (HCW) to improve their compliance with infection control practices.

In 2009, Glen was diagnosed with Acute Myeloid Leukaemia. On his path to recovery in 2011, he was invited by VICPA (Victorian Infection Control Professionals Association) to produce a story telling video sharing the personal impact of acquiring a HAI on both his family and himself. The production of 'Glen's Story' created a powerful teaching tool that has gained wide recognition at a national and international level. Today, Glen will share his personal journey with the audience, from working as a doctor in a hospital one day to ending up as a patient on the other side of the bed the next. Glen will discuss the many lessons learnt, with a particular focus on the importance of patient safety initiatives including good hand hygiene and Infection Control Practices, which ultimately prevent devastating outcomes for the patient.

'Glen's Story' is available on the Hand Hygiene Australia website and via the following You Tube link.

<http://www.youtube.com/watch?v=RIIsBB6TmZvA>

CONCURRENT SESSION 15: HAND HYGIENE, ASEPTIC TECHNIQUE & INFECTION PREVENTION  
FOR THE HEALTHCARE WORKER AND THE SUSPECTED CREUTZFELDT-JACOB PATIENT

## Healthcare Workers Compliance Towards Wearing Personal Protective Equipments When Caring for Patients Infected or Colonised With Multidrug Resistant Organisms in Healthcare Settings.



**Author**  
Jain S

### Abstract

Infection control interventions are required to reduce the transmission of microorganisms between patients in the healthcare setting. Standard precautions (SP) are recommended when handling blood and other body substances regardless of their presumed infection status. Transmission based precautions are recommend when SP are insuffcient to prevent the transmission of infections. Since 1986, contact precautions (CP) are applied in addition to SP to reduce further transmission of multidrug resistant organisms (MDROs).

When CP are in place, healthcare workers (HCW) wear gowns and gloves for all interactions that might involve contact with patients or potentially contaminated areas within the patient's surroundings. Evidence shows that HCWs gloves get contaminated during patient care and dirty gloves carry at least as great potential for harm as dirty hands. Routine use of gloves impedes hand hygiene and workers often neglect to change gloves in between procedures on the same patient resulting in same patient contamination rather than cross contamination from any other patient.

Moreover, researchers argue that the routine use of gowns and gloves among patients with MDROs failed to prove any benef t in healthcare related transmission of MDROs. This research will focus exclusively on the use of gowns and gloves when patients are under CP. Focus groups and survey of HCWs will be conducted to evaluate current practices relating to glove and gown use, adherence to hand hygiene and staff attitudes and belief towards not having to use gloves when caring for patients under CP and their knowledge on microbial transmission of MDROs. Mixed method will be will be used to evaluate and report HCWs compliance towards CP.

We should focus more resources on attempting to manage these microbes by the implementation of SP, hand hygiene compliance, antimicrobial stewardship, cleaning of shared equipments and patient environments to control transmission of MDRO rather than the misuse of personal protective equipment.

## “The Suspected Creutzfeldt-Jacob (CJD) Patient.”

### Author

Cullen M

### Abstract

CJD is a rare, fatal disease with limited transmission risks in health care which are often poorly understood or managed leading to the potential for suboptimal health care distressing for patients, their families and health care staff.

The 2013 revised guidelines provide clear information on the healthcare management of a person suspected of having CJD. This talk aims to “walk the audience through the guidelines” highlighting important first principles in the application of the infection prevention and control aspects of the care of these patients thereby reducing discrimination and providing a better patient outcome.

CONCURRENT SESSION 15: HAND HYGIENE, ASEPTIC TECHNIQUE & INFECTION PREVENTION  
FOR THE HEALTHCARE WORKER AND THE SUSPECTED CREUTZFELDT-JACOB PATIENT

**ORAL ABSTRACTS DAY THREE**  
**WEDNESDAY 26 NOVEMBER 2014**

## The Importance of executive management support in implementation science and healthcare improvement.



**Author**  
Jacobsen D

### Abstract

Leadership commitment and support is critical to the success of healthcare improvement.

Following the publication of the Institute for Healthcare Improvement's (IHI) White Paper: Seven Leadership Leverage Points for Organization-Level Improvement in Health Care in 2005, a great deal was learned about what it takes to achieve results in quality and safety at the organizational level. This learning was informed by the application by committed leaders of one or more of these leverage points in IHI's 100,000 Lives and 5 Million Lives Campaigns, during which hundreds of organizations achieved major improvements in system-level measures such as mortality rates and prevalence of harm.

IHI also learned a great deal about what works (and, importantly, what doesn't) from involvement in national initiatives such as The Health Foundation's Safer Patients Initiative in the UK, large-scale collaborative programs such as the 200+ organizations in IHI's IMPACT network participating in Learning and Innovation Communities, in-depth work with IHI's Strategic Partners, and direct fieldwork and interviews with health care clients as well as industry leaders outside health care.

The Second Edition (2008) white paper (1) incorporates this continued learning, particularly on the subject of execution, provides specific examples of the field application of each leverage point, and describes the relationship between the leverage points and other IHI leadership frameworks.

(1) Reinertsen JL, Bisognano M, Pugh MD. Seven Leadership Leverage Points for Organization-Level Improvement in Health Care (Second Edition). IHI Innovation Series white paper. Cambridge, MA: Institute for Healthcare Improvement; 2008.

# Optimal infection prevention strategies for caesarean section



## Authors

Martin E, Beckmann M, Merollini K, Graves N

## Abstract

There is currently no definitive international guideline on the most effective strategies to prevent surgical site infection (SSI) following caesarean section. An estimated 9% of women who have a caesarean section in Australia will acquire a SSI. Preventing caesarean section SSI requires unique strategies in addition to those applied for prevention of SSI generally. This study aimed to identify the most effective strategies to prevent post-caesarean SSI and develop a hypothetical infection prevention bundle that could be evaluated for its cost-effectiveness in Australian health services.

A systematic review that identified the most effective infection prevention strategies for caesarean section was conducted. Clinical guidelines were previously assessed in this study but deemed too inconsistent to provide guidance regarding the most effective strategies. Existing systematic reviews and meta-analyses were examined and then updated by extending the search periods. Studies were assessed for quality and effectiveness data was extracted and compared.

The review identified 45 individual infection prevention strategies for reducing post-caesarean SSI. Important strategies appropriate for both emergency and elective caesarean section included administering antibiotic prophylaxis pre-incision, vaginal cleansing, no pubic hair removal from 4 week before estimated date of delivery, and adopting a patient safety checklist.

The impact of post-caesarean SSI on the mother and health service is significant. For the mother, an infection results in pain and delay in returning to normal function and may compromise bonding with baby and establishment of breastfeeding, during an already challenging time. Consequences of SSI for the health service can be additional use of staff time, pharmaceutical and health supplies, and increased length of stay or re-admission to hospital, potentially foregoing a hospital bed for another patient.

Without definitive guidelines on the prevention of SSI following caesarean section, infection rates are likely to increase. Factors such as maternal obesity and increased incidence of twin gestations are influencing a rise in the caesarean birth rate. The more caesareans performed the more infections health services are likely to see, unless there is good compliance with implementing effective infection prevention strategies.

# Preventing Infections Through Cleaner Hospitals (PITCH): An Environmental Cleaning Bundle



## Authors

Allen M<sup>1, 2</sup>, Halton K<sup>1, 2</sup>, Hall L<sup>1, 2</sup>, Welsh C<sup>3</sup>, Graves N<sup>1, 2</sup>

1. Centre for Research Excellence in Reducing Healthcare Associated Infections (CRE-RHAI)
2. Institute of Health and Biomedical Innovation, School of Public Health and Social Work, Queensland University of Technology (QUT)
3. Logan Hospital, Metro South Healthcare and Hospital Service, Queensland Health

## Background

Whilst numerous lengthy cleaning standards and guidelines exist, translating this information into meaningful and sustained improvements in cleaning practice is challenging. A bundle is a small, straightforward set of evidence based practices that when performed collectively and reliably improve patient outcomes. This research has developed, implemented, and is evaluating, an environmental cleaning bundle to reduce healthcare associated infections (HAI).

## Methods

A structured literature review was used to identify evidence and a multi-disciplinary expert panel was used to prioritize practices for inclusion into the bundle. The 5 key areas identified were product use, cleaning technique, enhanced auditing, comprehensive training and improved communication. The Promoting Action Research in Health Services (PARIHS) framework provided an easy to use, yet comprehensive process. This framework helped to identify specific areas key to successful implementation, such as early engagement, and helped guide synthesis of information obtained from staff consultations and patient and staff surveys, to develop targeted training and project resources. The bundle was implemented in a tertiary facility for 6 months (Late May – November 2014).

## Results

The bundle will be evaluated against indicators including improvements in cleaning practices, improvements in staff knowledge, change in infection rates, and cost. Preliminary results will be presented.

## Conclusion

This research provides a practical evidence-based strategy to improve environmental cleaning practices in hospital, which will ultimately reduce the risk of HAIs.

## Disclosure of interest

No conflicts of interest to declare. Ms Allen is supported by a scholarship is funded through an NHMRC Centre of Research Excellence grant (1030103). Prof Nicholas Graves is supported by NHMRC Research Fellowship grant (1059565).



# The Economics of Controlling *Clostridium Difficile*



**Author**  
Brain D

## Background

*Clostridium difficile* is an emergent healthcare associated infection that causes significant morbidity and mortality. Literature regarding the clinical impact of the infection and clinical effectiveness of interventions is thorough in most jurisdictions. However, there is little evidence available to healthcare decision-makers about the most cost-effective approach for managing the disease. In Australia, there is yet to be an economic evaluation relating to *Clostridium difficile*. An economic evaluation will provide new information to healthcare decision makers and the findings of this research should be used to plan the control of its transmission.

## Methods

Economic evaluation allows the direct comparison of alternative interventions with current practice, to show incremental changes in health outcomes and costs, for those interventions under scrutiny. A cost-effectiveness model has been developed to reflect the best possible version of epidemiological reality, using the simplest structure. The model compares four (4) competing interventions that are common clinical strategies to reduce *Clostridium difficile* transmission: hygiene improvement, antimicrobial stewardship, reducing length of stay and probiotic use. Data relating to the clinical effectiveness of each intervention has been estimated from the literature and simulated in a stochastic mathematical model.

## Results

The results of the clinical efficacy will be coupled with the results of the economic model, in order to evaluate and compare the health gain per dollar spent for each intervention. Incremental differences in costs and health effects will be calculated and represented by *incremental cost-effectiveness ratios* (ICERs). ICERs for each intervention will be presented on a cost-effectiveness plane, allowing all four interventions to be compared simultaneously.

## Conclusion

Cost-effectiveness information relating to *Clostridium difficile* has not yet been available in Australia. An explicit analysis of common approaches to its prevention will provide novel evidence that will complement and improve current knowledge about managing risks of an emerging health issue. The research provides new evidence for health service planners and provides an economic rationale for decision-makers – allowing resource allocation to be made with both patient safety and budgetary constraints in mind.

# Antimicrobial Stewardship: An Economic Evaluation

## Authors

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2 Royal Brisbane and Women's Hospital, Herston, Brisbane, QLD



## Introduction

An effective approach to improving antimicrobial use in hospitals may be achieved by an organised antimicrobial management program known as Antimicrobial Stewardship (AMS). Whilst many studies have assessed the cost savings achieved by AMS programs due to the reduced use of antimicrobials, only a single study by Scheetz et al (2009), found that AMS interventions were cost effective in the setting of Chicago USA. AMS interventions have not been assessed for cost-effectiveness in the Australian setting. MALDI-TOF technology in the clinical microbiology laboratory has been found to improve patient outcomes in conjunction with AMS programs and also reduce costs associated with patient care (Huang 2013, Perez 2013). However the cost-effectiveness of the MALDI-TOF instrument with regard to AMS has not been assessed so far.

## Methods

A decision analytic model will be constructed using a decision tree with TreeAge software to assess the cost effectiveness of AMS programs and MALDI-TOF technology in the Australian setting. The bloodstream infection data and hospital cost data will be used to calculate the costs and outcomes achieved pre and post implementation of specific strategies as part of the AMS intervention in two Brisbane Metropolitan hospitals. The relative change in cost and effectiveness as a result of these interventions will then be expressed in terms of cost effectiveness ratios to assess the value for money of these strategies.

## Results

The model design and considerations when constructing the model will be presented to assess the cost effectiveness of these interventions with respect to the strategies used in each of the hospital settings.

## Conclusion

The results will be presented in terms of recommendations to healthcare decision makers regarding the best way to invest their health care resources. Better informed prescribing will lead to better outcomes for patients, better use of limited resources and reduce the incidence of unintended consequences of antimicrobial use.

## Disclosure of Interest Statement

None

## “Two draft policies and four months until the first patients arrive”. How Standard 3 - Preventing and Controlling Healthcare Associated Infections was used as the framework to develop an Infection Prevention and Control Plan at a “Greenfields Hospital”



### Author

Macknight C

### Objective

Develop an Infection Prevention Plan that would reflect best practice and embed Standard 3 into a new organisation. To achieve accreditation for a new facility.

### Methodology

A gap analysis approach was used to work through each of the Criterion with in Standard 3. The Australian Commission on Safety and Quality in Healthcare: Standard 3 Workbook was reviewed and the reflective questions were asked as the systems were drafted. An overall Standard 3 action plan was developed and implementation began. A number of Criterion ie surveillance, aseptic technique , hand hygiene and workforce immunisation, required individual action plans to implement the programs over 12- 18 months, as departments and new services came online.

### Results

Infection Prevention and Control plan is in place. From a ground zero position the facility achieved the New Facility Interim Accreditation for Ambulatory Care. The requirements and systems for each Criterion were established. The milestones of the individual plans are set up as Key Performances Indicators with executive support. Systems are being embedded prior to in patients and in preparation for the Full Ambulatory Care Accreditation and then the Inpatient Interim Accreditation Survey.

### Conclusion

A new hospital presented a “blank” canvas and the opportunity to develop an Infection Prevention and Control Structure from scratch. The Australian Commission on Safety and Quality in Healthcare: Standard 3, provided a detailed framework to systematically develop the structure and processes in a new and growing health care facility.

# The New Zealand Health Quality & Safety Commission Surgical Site Infection Improvement Programme



**Author**  
Jowitt D

## Background

The New Zealand Health Quality & Safety Commission (the Commission) was established in 2010 to support the health and disability sector to deliver safe, quality health care to New Zealanders. In mid-2012, as part of its broader infection prevention and control (IPC) programme, the Commission contracted the delivery of a national surgical site infection surveillance improvement programme (SSIIP). ICNet software was selected to support continuous national data collection, analysis and reporting. The SSIIP was rolled out across the public health sector in mid-2013 starting with hip and knee joint replacement procedures.

## Approach

The SSIIP works in partnership with district health boards (DHBs) and consumers to reduce harm from surgical site infections. The programme has clear goals and objectives, a measurement framework developed in consultation with the sector, and a focus on continuous improvement to reduce variability and increase patient safety. To maintain and drive the focus on improvement, the programme uses a number of improvement methodologies including Lean Six Sigma and the Institute for Healthcare Improvement (IHI) quality improvement methodology. IPC teams and surgical units are encouraged to work together to implement improvement e.g. recommended antibiotic, dose and timing, and to use the plan-do-study-act (PDSA) cycle to test and implement changes in practice.

## Conclusion

The SSIIP is using a quality improvement approach to deliver the national SSIIP. This approach reflects the overall role of the Commission in the wider sector, and aims to engage both healthcare staff and consumers in reducing harm from SSIs. Although it is too early to see a significant change in the SSI rate, since national reporting commenced in mid-2013, the SSI rate for hip and knee replacement procedures has decreased to 1.3 per 100 procedures from 1.6 per 100 procedures ( $p=0.42$ ). Appropriate antibiotic prophylaxis has improved from 63% to 89% ( $p<0.001$ ) and appropriate duration of antibiotic prophylaxis after surgery has improved from 54% to 84% ( $p<0.001$ ). Improvement in these measures should, in the long term, reduce the SSI rate.

# HEALTHCARE MERGERS: Infection Prevention And Control In A Diverse Healthcare Institution



## Author

Supsup N<sup>1</sup> Zanchettin S<sup>2</sup>

University Health Network, Toronto, Canada, Canadian Society for Medical Laboratory Science, Canadian Medical Laboratory Technologist of Ontario IPAC, Canada, Philippine Association of Medical Technologists

University Health Network, Toronto, Canada IPAC, Canada

## Abstract

One of the significant shifts in the health system in Canada today involves hospital mergers to create more robust hospital networks. In 2011, the Toronto Rehabilitation Institute, one of Canada's leading rehabilitation centers, merged with the University Health Network (UHN), a world-renowned tertiary care hospital network in Toronto.

Expectedly, confusion was inevitable in the initial stages of integration as well as anxieties about job securities. The Infection Prevention and Control (IPAC) personnel were not immune to these factors as two previously separate departments were required to unite with respect to processes and policies as well as portfolios and resourcing.

With the birth of a larger network, one of the goals was to strengthen the continuum of care. The model of care in rehab differed from acute care which meant that IPAC measures had to be adapted to fit the new combined care model. There were numerous consultations to expedite the harmonization of IPAC policies and procedures. Several processes also had to be standardized such as hand hygiene auditing, use of hospital disinfectants, reprocessing of multi-use devices, electronic access of patient records and medical directives. Within the department, portfolios were re-aligned to better serve the new organization.

These events provided an arena for learning. Education sessions were tailored to suit different groups of the new organization which included patients and visitors. Communication was vital in implementing these changes.

Despite being in different geographic locations, the IPAC department remained viable. The excellent leadership and newly developed departmental code of conduct enabled the IPAC department to operate efficiently.

Regardless of differences in culture, being prepared for positive and negative aspects in mergers increased the success of consolidating the two IPAC departments. With emerging pathogens in the community, the new UHN's IPAC department has well-planned actions and is always ready to execute something new.

# Neither Guest Houses nor Cafes - Perspectives on Infection Control in Aged Care, General Practice - The Non-acute Sector



**Author**  
Jenning M

## Abstract

After 20 years of educating, consulting and auditing in Infection Control in Aged Care, Community Health, General & Dental Practice, some of the trickiest moments are presented along with how they were managed. The audience is invited to comment on how it might manage these in hindsight. All but two belong to the last two years. Photos are included that highlight issues encountered in the non acute sector.

They are:

1. General practice reception staff who greet their patients with a kiss.
2. An aged care facility policy that indicates that gloves are not worn when toileting a resident unless there is faecal soiling because urine is sterile.
3. A young dental assistant who asks if the injury from a burr (drill bit) that she sustained last year is considered a sharps injury.
4. A bright doyley with fresh daffodils in a vase on the dressing trolley beside the patient couch in General Practice to make the patient feel more at home.
5. A sign that requests patients attending Community Health Care not to spit in the drinking fountain. (Consider that this was an incidental finding raised during an audit)
6. A public dentist who attends to trauma at a hospital who is asked by staff there to wring out bloodied gauze swabs in the sink then place them in the general waste bin?
7. A dentist who says he attends to staff exposures after hours because he is too busy to do this during the day?

So while it may be argued that we have national and state guidelines to cover all aspects of infection control, consider that the situations raised above reach into the core question of whether staff working in these environments actually consider themselves to be healthcare staff or even working in a healthcare facility. So how would you respond so as not to lose your clients and with the goal of encouraging them to address these issues in the most practical way possible? What does it feel like to be the Grinch who stole Christmas?

# Training Your Workforce To Prevent Healthcare Associated Infection: One Size Does Not Fit All.



**Author**  
Borrell S

## Background

Infection prevention education in tertiary hospitals is challenging with a high annual turnover of newly-trained clinical staff due to completion of graduate programs or rotation and transfer to other health services to broaden experience.

The Australian Commission on Safety and Quality in Healthcare (ACSQHC) National Safety and Quality Health Service (NSQHS) Standards focus on risk assessment in many of the standard 3, "preventing healthcare associated infection" criteria. The clinical workforce is expected to be trained in aseptic technique with competency-based assessment for those who perform procedures with invasive devices. Auditing and feedback processes to increase compliance with hand hygiene and standard and transmission- based precautions is widely undertaken in healthcare, however to select an effective competency- based training method in aseptic technique and management of invasive devices for several thousand clinical staff is a challenge.

## Issues

Online learning is convenient and cost effective but the question remains as to whether correctly answering a set of multiple choice questions translates into practice and deems an individual "competent". Given that adult recall in the learning process may be only 10% from listening and 20% from observing and it is well documented that people learn differently, online learning may not be enough to ensure the workforce is "trained". Online learning can assess knowledge but to deem an individual competent in practice, mandated assessment either in the clinical workplace or through simulation is required.

## Conclusion

Our hospital enhanced online learning by tailoring different educational strategies to various groups of staff. We will describe methods such as patient stories and survey feedback for emotional engagement, role modelling by senior staff , recruiting local champions, train the trainer programs, instruction on giving both positive and negative feedback, "just in time" education, using mannequins to practice invasive device management, locally developed instructional DVDs and simulated scenarios.

# **“Our patients are different”: Patient case mix and other risk factors for surgical site infections across Victorian public and private hospitals**

**Author** Johnson S, Richards M

## **Background**

The Victorian Healthcare Associated Infection Surveillance System (VICNISS) has performed prospective surveillance on surgical site infections (SSIs) in public hospitals since 2002 and selected private hospitals since 2009. Procedure-specific infection rates are stratified according to the National Healthcare Safety Network risk index. One criticism is the potential for differences in patient case mix not to be taken into account. This study aimed to compare patient case mix and risk factors between Victorian hospital types using enhanced surveillance data.

## **Methods**

Uniform SSI surveillance methods were used by participating Victorian hospitals. Descriptive analysis of Caesarean sections, coronary artery-bypass graft surgery (CAGS) and orthopaedic procedures was performed. Data were stratified by hospital type [private, large public (>100 beds) and small public]. Results: Overall, 39,010 Caesarean sections, 12,125 CAGS and 27,174 hip and 21,978 knee surgeries were analysed. Public hospitals had younger patients undergoing Caesarean sections (median 31 vs 35 years), with higher BMI (median 27.5 vs 25.2), more emergencies (56.8% vs 37.8%) and longer procedure duration (median 42 vs 33 minutes), compared to private hospitals. Public hospitals had younger patients undergoing CAGS (median 68 vs 69 years), with longer procedure duration (median minutes 267 vs 235). In public hospitals, hip/knee arthroplasty was also performed in older patients (median years hips 74 vs 70, knees 70 vs 68), with longer duration (median minutes hips 127 vs 115, knees 110 vs 89).

## **Conclusions**

Characteristics of patients and procedures vary considerably between hospital types. For quality reporting of SSIs, current methods for risk-indexing may not be ideal for all Victorian hospitals. Looking ahead, a procedure-based tool for risk-adjustment would be more robust to enable longitudinal reporting and benchmarking.

## **Additional Author**

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# Compliance of arthroplasty surgeon protocols for preventing surgical site infection with Australian guidelines



**Author**  
Naylor J

## Introduction & aims

There is evidence linking compliance with evidence-based standards and better outcomes after total knee or hip arthroplasty (TKA, THA). The extent arthroplasty service providers in Australia comply with standards recommended in guidelines for the prevention of surgical site infection is unknown. This study aimed to establish the level of compliance of arthroplasty intra-venous antimicrobial protocols with Australian guidelines for preventing surgical site infection.

## Method

A part random, part convenience sample of high-volume arthroplasty service providers (> 275 TKA or THA procedures per year) was surveyed. Each site was required to detail surgeon protocols for routine antimicrobial prophylaxes including drug, pre-operative timing, dose, and duration. The survey involved a written questionnaire with telephone and email follow-up for clarification. Protocols were assessed against the guidelines recommended for Australian hospitals – Therapeutic Guidelines: Antibiotics, 14, 2010. Results 155 protocols from 19 hospitals (11 public, 8 private) across five states were included. 1% of protocols (n=2) complied fully with the Guidelines; that is, 1% prescribed a single recommended drug at the right dose (Cephazolin 1 g < 80kg or 2g > 80 kg; Flucloxacillin 2g) for the recommended duration (up to 24 hrs post-surgery). Assessment of compliance with individual aspects of the guideline revealed that whilst 85% (n=131) routinely prescribed a single recommended drug (mainly Cephazolin, n=128), it was infrequently prescribed at the recommended dose (13%) or for the recommended duration (55%). Additional non-recommended practices included the use of gentamicin to cover urinary catheters (57%), a change in antibiotic dose pre- to post-surgery (37%), and the use of Vancomycin (8%) in the absence of indications. Ignoring compliance, 42% (n=7 public; n = 1 private) of sites had uniform protocols for all surgeons.

## Conclusions

Protocols for preventing infection following arthroplasty vary within and between hospitals. Low compliance with Australian guidelines is apparent. Use of non-recommended drugs, dosages and other anomalous practices may impact on outcomes and costs of arthroplasty surgery, and contribute to antibiotic resistance. If compliance with guidelines specific to the Australian context is important, there is considerable scope for improvement in arthroplasty service provision and patient outcomes.

# Educating the healthcare professional is the key to reducing catheter related blood stream infections

## Author

Gorman K



## Introduction

We believe healthcare professionals are the key to reducing Central Line Associated Bloodstream Infections (CLABSI). An intrinsic unit philosophy and understanding of the evidence-based practices around central line insertions will significantly improve the quality of patient care.

## Aim

To demonstrate that a strict unit policy and educational process for all personnel involved in the insertion of central lines would lead to a significant reduction in CLABSI. Setting A 24 bed intensive care unit in a tertiary hospital.

## Methods

Data collected on possible CLABSIs are collected and discussed in a joint monthly meeting of infectious disease specialists, microbiologists, intensive care physicians and infection prevention specialists: the CLABSI collaborative. In November 2011, a 10 step central line insertion protocol was instituted together with an educational program and an accreditation process (i.e. the intervention?). The intervention consisted of repeated lectures on our protocol, easily accessible reading material, and an assessment of the pre-reading with a 100 question multiple-choice paper completed by all trainees. The accreditation process requires multiple insertions under supervision before the proceduralist may insert central lines unsupervised.. We monitored the trend of CLABSI for three years prior to the intervention (July 2008 to October 2011) and assessed the impact of the intervention on the average number of CLABSI in the two year period post-intervention (November 2011 to October 2013). To account for the small numbers and high variability of CLABSI, the analysis considered a 12-month moving average at a quarterly level.

## Results

Prior to the intervention, the average number of CLABSI tracked consistently at approximately 4.4 per quarter. Within two months of introduction of the intervention, the CLABSI moving average had reduced to approximately 2.1 per quarter ( $p < 0.001$ ) with the number of CLABSI stabilizing at an average of 0.7 between January 2012 and September 2013.

## Conclusions

The intervention that included a rigorous central line insertion accreditation process and strict adherence to the insertion procedure has led to a significant decrease in the number of CLABSI within the Melbourne Health Intensive Care Unit.

# Antimicrobial resistance among urinary tract infection isolates of *Escherichia coli* in an Australian population-based sample

**Author**  
Fasugba O



## Introduction

Urinary tract infections (UTIs) are one of the most common infections acquired worldwide. *Escherichia coli* (*E. coli*), the pathogen most frequently implicated in UTIs, is becoming increasingly resistant to current antimicrobials. Whilst prevalence rates for urinary *E. coli* resistance have been reported in Australia, to our knowledge there are no published incidence data. Available data do not adjust for important variables like age and sex. There are also no data comparing resistance patterns for healthcare associated and community acquired UTIs. This study will evaluate the incidence and antimicrobial resistance (AMR) trends of *E. coli* UTIs and compare the prevalence of AMR in healthcare associated and community acquired isolates.

## Aims

The aims of this study are to: 1) Evaluate the incidence and antimicrobial resistance trend of urinary *E. coli* isolates over a five year period. 2) Compare the prevalence of antimicrobial resistance in healthcare associated and community acquired urinary *E. coli* isolates.

## Methods

Cohort and cross sectional designs will be used. In the cohort study, we retrospectively review urine samples processed at a regional laboratory to determine the cumulative incidence and AMR trend of urinary *E. coli* isolates over five years using the population of the Australian Capital Territory (ACT) as the denominator. In the cross sectional study, we review data from Canberra Hospital to compare the prevalence of AMR in healthcare associated and community acquired isolates.

## Outcomes

This study will provide healthcare providers in the ACT with incidence and prevalence data on UTI *E. coli* resistance to help inform treatment guidelines. The study will also provide research data for ongoing surveillance of AMR in urinary *E. coli* in Australia.

# Reporting on a proof of concept plan for national online surveillance of healthcare associated urinary tract infections



**Author**  
Gardner A

## Background

The urinary tract is the most common site of healthcare-associated infections and most healthcare-associated urinary tract infections (HAUTIs) are associated with indwelling urinary catheters giving rise to catheter associated urinary tract infections (CAUTIs). This project builds on the findings of Phase I of a three Phase project. Phase I of the project was conducted in three publicly funded and three private hospitals in two Australian jurisdictions. Our preliminary findings were used to develop a national protocol which has recently been published. Phase II is to provide proof of concept by testing our protocol using an online process.

## Aims

We present the protocol of a study which aims to: 1) To provide proof of concept of a national protocol for HAUTIs a) To develop a website incorporating tools for conducting point prevalence survey of HAUTIs and CAUTIs b) To pilot an online process for conducting point prevalence survey of HAUTIs and CAUTIs 2) To establish usability of a national protocol for HAUTIs in residential aged care facilities a) To determine the point prevalence of HAUTIs and CAUTIs in aged care facilities.

## Methods

Stage 1: A website and online database will be developed to enable institutions to conduct and record data from point prevalence surveys of HAUTIs.

Stage 2: A web based point prevalence of HAUTIs will be conducted in participating Australian hospitals and residential aged care facilities to test online data collection processes, including usability of website.

## Conclusion

The study outcomes have the potential to make available a centralised web-based database system for health facilities in Australia to report the point prevalence of healthcare associated urinary tract infections, through testing of study processes. The results will contribute to the development of a national strategy and surveillance system to address HAUTIs.

## Glamour Verses Effective Hand Hygiene: Incentives To Improve Effective Hand Hygiene Practices In Maternity Wards



### Author

Hurrell L

### Abstract

The wearing of wrist watches, hand/wrist jewellery and or nail polish, nail extensions or long nails by midwives in maternity wards compromises effective hand hygiene, which can lead to increased risks to the newborn, patients and staff.

A hand hygiene audit on the wards/units in the first period of 2013 consistently demonstrated varying degrees of non-compliance with both hand hygiene and organisational uniform guidelines.

Midwives were encouraged to attend a hand hygiene education session and to complete the Hand Hygiene Australia eLearning package within a month of the initial education session. Free fob watches were used as incentives to attend the education.

The percentage of midwifery staff who completed the eLearning package in conjunction with attending the education session ranged from 55% to 82% for the targeted wards/units, and there was an increased number of staff complying with the hand hygiene policies and uniform guidelines.

The incentive of the free fob watch was considered a successful strategy for Midwifery staff to complete the education requirements.

# No time for losers: producing infection control champions in the healthcare setting.



**Author**  
Brown L

## Aim

Nursing students spend considerable time learning evidence-based infection prevention and control (IPC) strategies at University and are expected to demonstrate a high level of adherence to these during clinical placement, yet in the clinical setting they are exposed to practice which can range from excellent to very poor. Nursing students may thus experience difficult handling situations where observed practice diverges from what they have been taught. This paper presents a current study that examines how the IPC knowledge that students acquire through their studies, influences their clinical practice and placement experience.

## Method and findings

There appears to be little published literature available in the Australian context as to how nursing students manage the divergence of knowledge and “real world” IPC practices, whilst on clinical placement. This prospective study is a replication, with minor changes, of research conducted by Hinkin and Cutter (2014) in the United Kingdom (UK). Students enrolled in the Bachelor of Nursing (BN) at Griffith University, Gold Coast Campus are invited to participate, consisting of five cohorts throughout the BN. Four of these are in line with the UK study with the addition of an extra cohort in the first year. Nursing students are invited to complete an anonymous questionnaire, as used by and with the permission of Hinkin and Cutter, related to their knowledge and the IPC practice of themselves and others in the clinical setting. These findings will be compared to the UK study. To provide greater insight into the phenomenon being examined and to assist with triangulation of data, Clinical Facilitators are also invited to reflect on their own IPC practice, in addition to students and others that they have observed in various clinical settings. Semi-structured interviews will be conducted with the facilitators to further explore the findings of the student questionnaires.

## Outcomes

The outcomes of this study will be utilised to inform future curriculum development and clinical preparation of nursing students across the Bachelor of Nursing programme. Empowerment and support of students to implement evidence-based IPC in the presence of poor practice and provide safe care is the ultimate goal of this study.

## Implementing Aseptic Technique 'train the trainer' model across the Northern Adelaide Local Health Network



### Author

Byron-Gray K

### Abstract

Standard 3: Preventing & Controlling HAI identifies the requirement for developing and implementing protocols for aseptic technique (AT). With several thousand clinical healthcare workers across the Northern Adelaide Local Health Network (NALHN), South Australia, a 'Train the Trainer' Workshop model was developed with 222 clinical staff completing the workshop, 2,700 staff completing the SA Health developed Online Learning Package and 1700 staff completing the associated competency assessment to date.

The Lyell McEwin Hospital Infection Prevention and Control (IPCS) team had been trained previously in Aseptic Technique practises through the SA Health Infection Control Service. The NALHN model ensured key stakeholders would be proficient in conducting auditing of aseptic technique practises within their divisions and to conduct competency assessments of clinical staff. An added bonus with this model of training was that it increased awareness of aseptic technique, highlighted current poor compliance and the importance of Moment 2 (Five Moments of Hand Hygiene). Compliance with Moment 2 increased from 69% – 81% by end June 2014. The IPCS team set out a time line with workshops being held twice a month over a four month period (March 2014 – June 2014). The pilot group for the project was the LMH Infection Control Link nurses, who provided valuable feedback.

The Aseptic Technique 'Train the Trainer' program was rolled out by Division with the highest risk (based on a detailed risk matrix completed by the Safety and Quality Standard 3 lead, the IPCS CSC and the Divisions). Medical and nursing buy-in of the program comprised of a 'road show' to Divisional Directors conducted by the Executive Lead and Safety and Quality Lead of Standard 3 (also Chair of the NALHN Infection Prevention and Control Committee) outlining responsibilities of being an Aseptic Technique champion. To qualify for the workshop, clinical healthcare workers were required to have completed their online learning packages for Hand Hygiene and Aseptic Technique which also improved compliance with both these modules. Workshops were comprised of a presentation, followed by practical demonstrations. Evaluation of the program was completed using a standardised evaluation form highlighting a raised awareness of infection control practises throughout the clinical disciplines.

# Cricket bats and containment: Can zombie pop culture be used to improve infection prevention and control practices?



**Author**  
Mason M

## Introduction

"The Walking Dead. Scientific name *Homo Coprophagus Somnambulus*. A deceased human being who has partially returned to life due to undeterminable causes." The Urban Dictionary. Wikipedia currently lists 383 feature length "A-list" zombie films, released between 1932 and 2014. These films indicate a number of causes of "zombification" including a microbial agent which has not been contained and spreads readily from person to person. Given this situation, it is pertinent to explore how the infection prevention and control (IPC) community can best capitalise upon this pop culture phenomenon.

## Method

A search of feature length films, in English, released from 2000-2014 was conducted. Each film was checked against the public online databases iMDB, Rotten Tomatoes and Wikipedia to identify the cause of the zombie infestation featured in each film.

To understand the role and impact of zombie films in pop culture, a search of peer-reviewed journals, published in English, was conducted, with no date limitations. Search terms included "infection control", "zombie" and "film".

## Results

On review of the films included on the Wikipedia list, 238 zombie films were released from 2000 to date. Of these 69 films had an infectious cause of some kind (viral, bacterial, parasite, extraterrestrial, zoonotic or other biological cause). For 48 films, the cause is unclear. In the remainder ( $n=121$ ), zombification has no traceable infectious cause.

Preliminary results indicate that pop culture is influenced by global health issues resulting in an increase in the release of infectious biohorror films in the years following outbreaks such as SARS and pandemic influenza.

## Discussion

The use of pop culture to initiate innovation in science is well recognised. Subsequently this can be extrapolated for use in the development and adoption of IPC practice in both public health and acute care settings.

## Conclusion

There are clear indications that contemporary IPC technologies are evident in these films, successful or not. Using contemporary cultural influences allows healthcare workers and the public to contextualise IPC theory and practice in an accessible and memorable way.



## Best practice infection management during hospital refurbishment projects

### Author

Kolominas C, Taylor K

### Abstract

Redevelopment projects in hospitals present many concerns related to infection control for staff, patients, contractors and healthcare facility managers.

As part of the planning for the redevelopment of four operating theatres and the construction of an additional three theatres due to commence early in 2014, The Wesley Hospital management was focused on ensuring that a clean environment was maintained and that there were no increases in dust and associated mould, fungus and bacteria levels during construction. The need to be able to safely continue the use of operating theatres directly adjacent to the construction work was of critical concern. To address this concern hospital management utilised an advanced system of real-time dust monitoring, reporting and management, supported by periodic air quality testing and robust management processes.

The system at The Wesley Hospital comprised several continuous air quality monitors, placed at strategic locations, coupled to a system providing SMS alerts, email alerts and automated daily reports. The real-time system allowed for rapid identification and response of potential dust contamination inside the active operating theatres while re-development was taking place in adjacent areas. Real-time alerts and automated reports were provided to all key stakeholders, including project managers, contractors, infection control personnel and hospital management and provided instantaneous feedback on whether construction activities were leading to above-background levels of particulate matter (and associated mould, fungus and bacteria). This ensured that any potential contamination issues were identified and addressed pro-actively, thereby avoiding potential harm to patients.

The system was supported by monthly air quality testing, which includes temperature, relative humidity, carbon dioxide and carbon monoxide levels, total volatile organic compounds (TVOC), respirable particulate matter, airborne fungi and bacteria levels in potentially affected areas within the operating suite.

The successful completion of the first stage of the refurbishment project resulted in important learnings regarding effective management process in hospital redevelopments and a high level of essential data regarding typical baseline dust levels in the operating suite were also established. Ultimately, hospital management concluded that the project demonstrated best practice infection control for hospital redevelopment projects that could be applied elsewhere.

## Evidence base for the interventions to improve hand hygiene and the pros and cons of automated hand hygiene systems.



**Author**  
Schweizer M

### **Abstract**

Hand hygiene is among the most effective strategies to prevent healthcare-associated infections. In this plenary we will review the evidence base for common interventions to improve healthcare practitioner hand hygiene. We will also discuss the evidence for and against the 4 different types of automated hand hygiene systems: video-monitored direct observation, electronically enhanced direct observation, electronic dispenser counters, and automated hand hygiene monitoring networks.

PLENARY 10

# POSTER ABSTRACTS

## #01. Assessment of barriers to influenza vaccination: preliminary results of a study in healthcare workers from institutions in France



### Author

Kadi Z

### Introduction / Objectives

The severity of influenza and the efficacy of influenza vaccination in vulnerable or at-risk populations is well documented. Recent studies in France showed that the coverage of influenza vaccination did not exceed, in most cases, 20% of HCW from institutions in France). The objective of this study was to measure the coverage and to evaluate possible obstacles to this vaccination.

### Materials and Methods

A cross-sectional, multicenter study was conducted in French healthcare institutions of France in 2013. Participants were invited to complete an anonymous and self-administered questionnaire. Healthcare institutions participated on a voluntary basis. The factors associated with influenza vaccination were identified using a logistic regression model.

### Results

A total of 1371 questionnaires from 21 healthcare institutions were completed. Nurses and nurse's aides accounted for the largest proportion of the responders (56%). Physicians accounted for 5.3% of the total. Vaccination coverage was 22.3%. The physicians and senior nurses had the highest levels of vaccination coverage (56.7% and 44.6%, respectively). Influenza vaccination coverage was significantly associated with level of knowledge about influenza. Among the 764 (56.4%) participants who had never been vaccinated against influenza, 31.9% believed that "The vaccine caused influenza" or "The vaccine has too many side effects" (29.2%). At the time of the study, 44.8% of the total responders are sure not to get vaccinated the following year.

### Conclusion

Influenza vaccination appears to be associated with the level of knowledge of participants on the modes of transmission and means of prevention of flu. In this study, the participants appear to underestimate the effectiveness of influenza vaccine and are not sure about its safety. Further studies will likely be required to determine ways and means for effective information of professionals that are still refractory to influenza immunization.

## #02. Culture Kit

### Author

Callard M

### Introduction

The key to treatment of sepsis is early detection of the causative organism, and commencement of appropriate antimicrobial therapy. False positive blood culture reports may result in prescribing of inappropriate antibiotic therapy and sub-optimal patient care. In 2011, the overall rate for blood culture contamination for Campbelltown Hospital was 44%. The Infection Prevention Committee identified an opportunity to improve clinical practice with the implementation of blood culture kits. Provision of a standardized kit for obtaining blood cultures has a number of advantages for the patient and the facility. These include: prescribing of correct antibiotics, decreased equipment wastage, efficient use of clinicians time and less repeat tests for the patient. Aim To reduce blood culture contamination rates from 44% to 3% annually.

### Methods

Aseptic technique is a key element embedded in the kit. The instruction leaflet enclosed in the kit details 10 steps, including when hand hygiene must be performed and adherence to aseptic technique. The kit consists of a specimen bag containing a safety blood collection cannula, a vacutainer, three chlorhexidine and alcohol swabsticks, gauze, a disposable tourniquet, sterile gauze and blood culture bottles. A trial of the kits was conducted in the Intensive Care Unit and was favorably received, with comments for minor modification. The hospital volunteers were approached to assist with kit assembly and this has been ongoing. All kits are distributed from a central point in the pathology department. In April 2012, the kits were rolled out to all the adult wards in the hospital. In 2013, a sterile drape was included in the kits to provide a sterile field. The Pediatric Units, Special Care Nursery and the Emergency Department were excluded from the program due to varied equipment requirements.

### Results

Prior to the rollout of the kits the overall rate for contaminated blood cultures for the adult wards was 12.2%. In the first year this was reduced to 8.75%, the following year it was 8.0% and for the period from April to July 2014 the rate has reduced to 5.9%.

**Keywords:** Blood, Culture, Aseptic technique

**Conflict of Interest:** There is no conflict of interest.

### #03. Implementing a staff immunisation program in a private health organisation – our experience



#### Author

Sie B

#### Objectives

To implement a staff immunization program to meet Standards 3.6 and 3.7 of the National Safety and Quality Health Services (NSQHS).

#### Background

A staff immunization program is one of the strategies for prevention and control of healthcare associated infections. Furthermore, it is a requirement for a health service to develop a workforce immunization program to comply with NSQHS Standards 3.6 and 3.7. Cabrini Health is an 835 bed, multi-site private health organization which provides acute, subacute, palliative and aged-care services. In 2013, Cabrini Health implemented a staff immunization program and was assessed as compliant in an Australian Council on Healthcare Standards (ACHS) conducted survey in December 2013.

#### Methods

A literature review was undertaken to identify potential barriers and attitudes of staff regarding vaccination. Initially, a pilot immunization program was implemented in high risk clinical areas (paediatrics, maternity and oncology wards) before introducing an organization wide immunization program.

#### Results

Strong executive support and leadership were critical to implementation of the staff immunization program, combined with a focus on engaging staff on the importance of immunization.

Strategies included:

Effective planning for provision of resources

Ongoing communication between stakeholders (both top-down and bottom-up approach)

Involvement of the communication department to disseminate immunization policy directives and information effectively and in a timely fashion

Improvement of vaccination knowledge and requirements among staff

Development of a staff immunization database which integrated with the organizational electronic human resource management software

Dedicated immunization nurse to improve staff access to immunization

Engaging with the patients and ascertaining their expectation regarding staff immunization

A research project on attitudes to staff immunization in high risk patient groups

#### Conclusion

Ongoing communication aligning, with the objectives of the organization and engagement with staff and patients are key features of implementing a workforce immunization program in the private sector.

#### Competing Interest

None declared

## #04. Impact of needleless connector type on the incidence of coagulase negative staphylococcus in blood cultures drawn from peripherally inserted central catheters in haematology / oncology inpatients



### Author

Haywood P

### Introduction

Peripherally inserted central catheter's (PICCs) are often required in haematology /oncology inpatients, but their use is associated with several complications, including blood stream infection. Skin commensal bacteria including coagulase negative staphylococcus (CoNS) is often implicated in these infections. When compared to the 'split septum' type of needleless connector, the 'mechanical valve' type has been associated with increased blood stream infection rates.

### Aim

To monitor the impact of a change in the type of needleless connector on the species of bacterial isolates cultured in blood drawn from PICCs.

### Method

A retrospective audit of all blood cultures taken on the inpatient haematology/ oncology unit was undertaken. The type of catheter, source of culture and species of cultured isolate were collected. Blood culture contamination was determined using the definition of the College of American Pathologists. From January 2014 the type of connector used on PICCs was changed from a 'mechanical valve' to a 'reverse split septum' in order to standardize equipment hospital wide. Contamination rates and species of blood culture isolate before and after that date were compared.

### Results

Between January and December 2013 a total of 88 sets of blood cultures drawn from PICCs were positive for bacterial growth; in 16 (18%) of these sets a CoNS was identified. There were 29 distinct episodes where at least one set of blood cultures drawn from a PICC was positive of bacterial growth; in 11 (38%) of these a CoNS was identified, in 8 (9%) a CoNS was the only species identified. Between January and July 2014, 11 such infective episodes were identified. Of these, zero CoNS were identified. From January and July 2014, there were 14 sets of contaminated blood cultures from 436 (3.2%) sets drawn from PICCs. Between January and July 2014, there were 0 contaminated sets from 182 sets drawn from PICCs ( $p=0.014$ ).

### Conclusion

The type of needleless connector used on PICCs can significantly influence the incidence of CoNS in blood cultures drawn from PICCs. Monitoring rates of blood culture contamination drawn from PICCs is a simple and useful method of monitoring changes in PICC management practice in haematology/oncology patients.

## #05. Why don't Doctors follow the Recommendations of Antibiotic Computerised Decision Support Systems?

**Author**

Chow A



### **Background**

Antimicrobial resistance is now regarded as a public health crisis, threatening the achievements of modern medicine. Antibiotic prescribing is the key driver of antibiotic resistance. The intensity of antibiotic use in hospitals is high, but 41-91% of all antibiotics prescribed in hospitals worldwide are considered inappropriate. Antibiotic computerized decision support systems (CDSS) have been developed to facilitate optimal prescribing, but acceptance of their recommendations have remained low. This study aims to evaluate physicians' perceptions and attitudes toward antibiotic CDSS, and to determine the psychosocial factors associated with acceptance of CDSS recommendations for empiric antibiotic therapy.

### **Methods**

We conducted a mixed-methods study in a 1500-bed tertiary-care hospital in Singapore, with its home-grown tailor-made antibiotic CDSS that integrates antimicrobial stewardship with the hospital's electronic prescribing system. At the point of prescribing, the CDSS provides patient-specific recommendations on the most appropriate antibiotics for the diagnosed infection based on local infectious disease epidemiology and antibiotic susceptibility patterns, taking into account the patient's antibiotic allergies and renal function. Focus group discussions were conducted among purposively-sampled physicians and data analyzed using the framework approach. Emerging themes were included in the questionnaire with newly-developed scales for the subsequent cross-sectional survey involving all physicians. Principal components analysis was performed to derive the latent factor structure which was later applied in the multivariable logistic regression analyses.

### **Results**

Physicians expressed confidence in the credibility of CDSS recommendations. Whilst junior doctors accepted CDSS recommendations most of the time, senior doctors acknowledged rejecting recommendations in complex patients with multiple infections or allergies. Willingness to consult CDSS for common and complex infections (OR 1.68; 95%CI 1.16, 2.44) and preference for personal decision on antibiotic choice (OR 0.61; 95%CI 0.43, 0.85) were independently associated with acceptance of CDSS recommendations. Cronbach's alpha for the scales measuring physicians' attitudes and perceptions toward acceptance of CDSS recommendations ranged from 0.64 to 0.88. **Conclusions** The physician's willingness to consult an antibiotic CDSS determined the physician's acceptance of its antibiotic recommendations. Physicians would choose to exercise their own decision on antibiotic choices over the CDSS recommendations in complex patient situations when their antibiotic prescribing needs were not met.



## #06. Closing the Loop: providing evidence for Standard 3 from audit to outcome

### Author

Lovegrove A

### Background

Accreditation is an invaluable review process in healthcare. The new framework of the National Standards posed a considerable challenge in requesting the evidence to demonstrate the currency and performance of the protocols and procedures enshrined by the governance of the organization. One of the salient points in the new national standard approach was to ensure the knowledge was held by the practitioners at the clinical face.

### Method

The plan, do, collect data, and analyze (PDCA) cycle was the basis for establishing a process of providing the evidence at the local level for Standard 3: Preventing and Controlling Healthcare Associated Infections. A staff survey across all disciplines was conducted prior to, and throughout the lead up to accreditation to access knowledge levels. Historically infection control audits have been carried out annually in all clinical units. These encompass compliance rates with Hand hygiene, aseptic technique, immunization and occupational exposures, management of sterile stock and reprocessed items, transmission based precautions, patient information, environmental and equipment cleaning. The iAuditor program is tailored for this function with its ability to be used via a hand held mobile device, to photograph evidence, and through color, readily provide a gap analysis. Utilizing an Action Plan with the traffic light system of Red, amber and green issues were addressed in a timely manner. Environmental cleaning time was known to be an ongoing issue for all units. A template for Cleaning Schedules was developed. This required the unit to nominate the cleaning requirements for their individual units, determining what needed cleaning, the frequency, what method, and by whom (sign off required). Collaboration with environmental services management was required. Unit Managers required support from governance to facilitate and implement actions. Each DDON was assigned to multiple clinical areas in conjunction with a quality coordinator, who then reported back progress on each action plan.

### Results

The surveys demonstrated a significant improvement in knowledge held at the clinical face. Where required, some interim quality activities were undertaken eg. Observation of aseptic technique, PPE audits, hand hygiene audits. The incorporation of educators and clinical staff as auditors sharpened focus on practice and procedures. Procedures were reviewed. Journey boards and evidence folders were produced to demonstrate and display the gaps, the actions and the progress. The visual display of data told the story and demonstrated purpose and improvement.

### Conclusion

The quality PDCA cycle formed a robust structure. The iAuditor clearly defined the gaps in compliance and the Action Plan demonstrated the actions and outcomes moving forward. Having the support of their senior staff with budgetary influence enabled NUM's to facilitate the actions required. The involvement of all staff in the process ensured the knowledge was widely distributed and readily available to all staff on all shifts.

## #07. The Informal Sharing of Human Donor Milk (HDM): benefits, risks and safety issues in health care facilities and the community.



### Author

Whitelaw J

### Abstract

The immunological and nutritional advantages of human (breast) milk are uncontested. The WHO recommendation for exclusive breastfeeding of infants in the first six months of life is globally supported. Human milk is a dynamic, bioactive and species selective product but is not sterile, thereby posing a relatively minimal yet tangible risk of disease transmission. Benefits from the provision of screened and pasteurized HDM to neonatal intensive care units from established human milk banks over recent decades are evidenced by reported reductions in sepsis, necrotising enterocolitis and other improved outcomes in this population. There are presently five milk banks in Australia that supply almost exclusively to dedicated hospitals. The demand for HDM, where mothers may be unable to provide for their infants in hospital, or where mothers prefer not to formula feed their infants at home, instates human milk as a prime commodity. The informal sharing of unscreened or unpasteurized HDM from known contacts or via internet sites raises contentious issues relating to potential disease transmission, nutrition and litigation. In describing a balanced and informative review of the benefits and hazards of informal HDM sharing, this paper aims to support to informed risk management in health care facilities where pasteurized HDM is unavailable and to assist informed decision making for mothers in the public setting.

POSTER ABSTRACTS

## #08. Same, same - different decade. Needlestick injuries (NSIs) : an ongoing problem

### Author

Martland S

### Abstract

"The prevalence of NSIs in Australia is not known. However, recent publications would suggest that NSIs in Australian hospitals occur at a significant rate, which is probably not different to that of 15 years ago." Professor Michael Whitby wrote this in a guest editorial published in the Australian Infection Control Journal in June 2004. The question for today is how much has changed in the past 10 years?? The exact prevalence of NSIs in Australia is still not known because there is no national surveillance program in place for occupational exposure to bloodborne pathogens. Based on published data by Murphy, it's estimated that more than 19000 needlestick and sharps injuries occur every year in Australian healthcare facilities. That's 52 injuries every day of the year. We must never forget that every injury happens to a person - one of your colleagues, a friend, a relative, maybe even you.... Why aren't we putting a stop to this? We all have the ability to drive change in our own organizations and advocating for mandatory use of safety engineered devices is a necessary step in preventing this ongoing problem. Even 10 years ago, Whitby stated that the reduction of NSIs will depend on an engineering solution and that large numbers of safety devices are now available. Surely more can be done at a facility level to introduce policy and work practice changes that require safety engineered devices be implemented and used, without question, especially for skin injection, intravenous cannulation and blood collection procedures. The author will outline examples of policy and work practice changes that have resulted in improved safety for healthcare workers by reducing the risk of occupational exposure to bloodborne pathogens. As Whitby said in 2004, "the focus of all jurisdictions needs to be directed to where the risk is occurring - in many Australian hospitals, healthcare workers are still no more protected against NSIs than they were more than a decade ago." Food for thought.....

## #09. Can Standard 3 be developed into a strategic priority plan?

### Author

Bendall J

### Abstract

Using the National Standard 3 framework, South Eastern Sydney Local Health District developed a 3 year Priority Plan for the prevention of HAIs. To develop the plan, structured interviews were held with over 70 lead clinicians, executive, sterilizing, pathology and environmental cleaning managers. Both achievements and gaps were identified during the consultation. The results were collated into a SWOT analysis for a facilitated workshop to determine priorities. The Priority Plan articulates National, State and local priorities. One of the top 5 priorities identified was the development of a Strategic Audit Plan and standardized audits. The Strategic Audit Plan includes mandatory and high risk audit requirements for SESLHD. Each healthcare facility can add their local audit plans, frequenting and peak reporting committees. Using the National Standard 3 framework, South Eastern Sydney Local Health District developed a 3 year Priority Plan for the prevention of HAIs. To develop the plan, structured interviews were held with over 70 lead clinicians, executive, sterilizing, pathology and environmental cleaning managers. Both achievements and gaps were identified during the consultation. The results were collated into a SWOT analysis for a facilitated workshop to determine priorities. The Priority Plan articulates National, State and local priorities. One of the top 5 priorities identified was the development of a Strategic Audit Plan and standardized audits. The Strategic Audit Plan includes mandatory and high risk audit requirements for SESLHD. Each healthcare facility can add their local audit plans, frequency and peak reporting committees. These have been developed and examples presented will be: Aseptic Technique Audit and a survey of patients/clients within SESLHD on staff hand hygiene practices; their understanding of why staff perform hand hygiene and determine if they would ask staff to perform hand hygiene. 370 patients/clients within SESLHD were surveyed 2-7 May 2014. 55% of patients stated that they would be comfortable asking a staff member to perform hand hygiene.

POSTER ABSTRACTS

## #10. Graduate Nurses as champions in Clean Hands = Best Care

### Author

Radalj P

### Background

The Clean Hands = Best Care project commenced in 2012 seeking to embed Hand Hygiene Australia's program and increase hand hygiene compliance to 100% utilizing a steering committee led by the Chief Executive Officer. The organization was concerned that hand hygiene compliance had plateaued at 70% and that compliance of 100% would not be achieved utilizing current strategies. The practice development working group was one of the working groups exploring focus areas with key questions for the steering committee. This group explored the barriers and enablers for hand hygiene knowledge translation; aiming to improve the alignment of actual practice with best practice. The group set the goal of connecting the 5 Moments for Hand Hygiene to clinical practice. Audit and feedback was identified as a knowledge translation strategy. Graduate nurses and midwives at Barwon Health are required to complete a project related to the National Safety and Quality Health Service Standards as a requirement of their program. The practice development working group invited interested graduates to participate in the hand hygiene compliance auditing and training that would link them to Standard 3.5 and provide them with an opportunity to develop a project aligned with the current work.

### Aim

Enable graduate nurses and midwives to participate in the hand hygiene compliance auditing and training linking them to Standard 3.5 and develop a project aligned with the hand hygiene project.

### Goal

Improve the graduate nurses understanding of the Accreditation process and the Quality and Safety indicators that must be evidenced in practice for the assessors.

### Methodology

Graduate nurses and midwives will attend training as designed by Hand Hygiene Australia and audit health care worker compliance in the 5 Moments for Hand Hygiene, observing for at least two hours per month.

Graduates will be supervised and assisted by the hand hygiene project manager. The graduate nurses will plan and implement a project related to hand hygiene in addition to auditing.

### Results

The outcomes of employing graduate nurses and midwives as auditors will be discussed.

The capacity to increase hand hygiene compliance utilising innovative strategies developed through the graduate auditors and their projects

## #11. Ophthalmology instrument cleaning and disinfection – a best practice journey

### Author

Vollweiler M

### Background

Mercy Hospital, Dunedin carries out over 500 cases of cataract surgery annually. Toxic Anterior Segment Syndrome (TASS) is a complication of intraocular surgery that occurs when a non-infectious agent enters the anterior segment of the eye and causes an inflammatory reaction. Severe cases of TASS can cause permanent harm. Cleaning and disinfection procedures of ophthalmic equipment have been linked to TASS outbreaks in overseas hospitals and recently in New Zealand. This poster highlights current evidence.

### Method

Developing an audit tool based on American recommended practices for cleaning and sterilizing intraocular surgical instruments enabled the Infection Prevention & Control Nurse to complete an audit of ophthalmology cleaning and disinfection practices. This poster shares audit findings which identified a range of workplace design, workflow and technician procedural issues that could potentially cause patient infection.

### Results

The poster demonstrates how the Central Sterilising team and Infection Prevention & Control Nurse created and implemented an audit action plan that addressed these issues. Documenting procedures, standardizing training, redesigning workstations and introducing automated equipment resulted in ophthalmology cleaning and disinfection meeting these best practice recommendations.

### Conclusions

Framing the journey that emerged from the audit road map into a quality model allowed us to stand tall and share our learning. This poster demonstrates how TASS cases are being reported in New Zealand and that hospitals should complete an audit of their sterilising services against best practice standards.

## #12. Identity badges and lanyards in paediatrics – a source of viral transmission?

### Author

Cheng D

### Background

Identity (ID) badges and lanyards worn by paediatric health care workers (HCW) are reservoirs and potential vectors of nosocomial bacterial infections. Given the higher incidence of viral infections in children, it is important to better appreciate the potential nosocomial viral transmission risk. This study aims to determine the plausibility of ID badges and lanyards worn by paediatric HCWs to act as vectors for nosocomial infections and patient-to-patient transmission of respiratory and gastrointestinal viruses.

### Methods

A cross-sectional study was performed in October 2012 and August 2013. Ninety nine ID badges and lanyards from paediatric HCWs were swabbed and tested using polymerase chain reaction (PCR) for nine commonly encountered respiratory and two gastrointestinal viruses. All respiratory and faecal samples performed on paediatric patients for clinical reasons during 2012-2013 were analysed for comparison.

### Results

The rate of positive respiratory ID badges and lanyard samples across the study period was 1.0%. This compares with an overall 56.4% positive PCR nasopharyngeal swab rate in tests ordered on paediatric patients across the study period for the same group of respiratory viruses. There were no positive gastrointestinal viruses detected from HCW swabs whereas 4.9% of clinical paediatric faecal samples tested positive for the two targeted viruses (norovirus and rotavirus).

### Conclusion

ID badges and lanyards do not play a significant role in the nosocomial transmission of respiratory or gastrointestinal viruses.

## #13. A point prevalence survey of nurse sensitive indicators associated with the management of central venous access devices (CVAD) and the prevention of central line-associated bloodstream infection (CLABSI)

### Author

Solomon N

### Background

Central venous access devices (CVAD) are commonly used in health-care settings; however they are also one of the most frequent causes of health-care associated bloodstream infections. Whilst extensive research has been complied about the prevention of central line-associated bloodstream infection (CLABSI) with recommendations of catheter type, number of lumens and length of therapy, information regarding nursing practice in the context of CVAD is relatively unknown.

### Aims

The primary aim of this study was to identify the prevalence of CVAD in use within Melbourne Health. The secondary aims of this study were to describe the current practice of nursing management of these devices and illustrate the clinical characteristics of patients with CLABSI.

### Methods

A point prevalence survey of CVAD use amongst an adult population at Melbourne Health was undertaken over two days in January 2014. Results: There were 712 patients being assessed during this survey, 54 (7.6%) of whom had a CVAD in situ. CVAD use was most prominent in the intensive care unit and oncology ward. There was variability evident in practice patterns associated with documentation related to CVAD. Documentation for site maintenance was evident in 96.2 % (n=51) of patients, whilst the frequency of dressing change was documented in 48.1% (n=26) of cases and the date for when the next dressing was due was documented in 49% (n=26) of cases. Commonly accepted indicators of infection were not always indicative of CLABSI. Patients with evidence of indicators of infection had blood cultures taken (n=13, 24.1%) and 3.7% (n=2) were positive.

### Conclusion

Melbourne Health should promote standardising practice across departments and ensure adequate documentation of nurse-sensitive indicators for the prevention of infection.



## #14. Increasing opportunistic vaccination utilising Healthcare worker Inf uenza campaign

### Author

Altmann M

### Abstract

Outbreaks of vaccine preventable disease (VPD) are costly, time consuming and can consume large amounts of Infection Control resources. Princess Alexandra Hospital (PAH) has had five (5) episodes of measles and eight (8) episodes of Varicella Zoster Virus (VzV) contact tracing over the last three years. Even with education and vaccination campaigns staff continues to identify as being unvaccinated or unaware of their immune status. By utilizing the annual inf uenza consent form to identify these health care workers (HCW) Infection Control could proactively promote targeted vaccination. Despite Infection Control providing a weekly staff vaccination clinic, staffs are identified as being unvaccinated for VPD with no history of disease during outbreak investigation. Utilizing the broad reach of the annual HCW Inf uenza campaign it was anticipated that many of these staff may be identified via the additional questions on the consent form and referred to the staff clinic for follow up. Inf uenza vaccination is widely advertised and resourced to HCWs within the PAH with an average administration of 3800 to 4100 vaccines annually. Incorporating additional opportunistic data collection on Varicella and Measles engaged the inf uenza vaccine attendees to consider their immunity to VPD and provided the opportunity for Infection Control staff to refer HCWs for serology or vaccination. A staff vaccine clinic business card with the VPD identified, clinic location and time was given to the HCW to follow up. This activity took very little extra time in the inf uenza consent process. Verbal recommendation to attend staff clinic was reinforced with the receipt of their clinic card. This initiative saw an increase in the number of staff attending the weekly vaccination clinic for VzV serology and Measles vaccination during and after the inf uenza campaign. The majority of staff who identified as being unsure of VzV history was immune on serology and did not require further intervention. Of the VzV non-immune staff who were recommended to attend for vaccination only 50% attended, with many of those declining sighting the cost of vaccine as prohibitive. Free Measles vaccination uptake increased with the influence of the inf uenza campaign and the awareness of circulating measles disease in the community. Utilizing the Inf uenza vaccination consent form to identify HCW immunity to VPD and promoting the staff vaccine clinic was an effective strategy to increase HCW immunity and awareness of VPD immunity status.

## #15. A research journey: Undertaking a pilot study of patients' perceptions of healthcare-acquired infections.

### Author

Mason M

### Background

The lack of Australian studies about patients' knowledge and perceptions of healthcare-acquired infections provided the impetus for a pilot study in two healthcare facilities in north Queensland. We administered an adaptation of a questionnaire previously used in the United Kingdom to a convenience sample of surgical patients in a tertiary-level North Queensland hospital and a smaller, remote facility in Far North Queensland.

### Aim

To describe our experiences of undertaking multi-site research in an Australian setting, in the context of an overview of the research undertaken.

### Results

While the inception of the research project was smooth and uneventful, the process of implementing the project was far less so. Seven sites were identified and tentative agreement was obtained to participate during the planning phase of the project. For a variety of reasons, only two sites participated in the pilot study. Issues we encountered included significant changes to health service management teams and difficulties in navigating research and ethical governance structures. The recruitment of participants in the remote site was also particularly challenging, largely due to the irregularity of surgical lists. Amongst the 29 men and 22 women who completed the questionnaires, awareness of the risk of hospital-acquired infections preoperatively was common (n=42). The majority claimed they had adequate information (n=36) and understanding (n=41), although knowledge of specific bacteria was poor. Doctors, the hospital and television were most frequently nominated as the sources of participants' information; many responded that the media did not accurately portray hospital-acquired infections. Respondents suggested that the availability and use of alcoholic hand-rub by staff and patients, and involving patients in their own care, would assist in preventing hospital-acquired infections.

### Conclusion

Multi-site research is a valuable tool for infection prevention and control although not without hurdles. We plan to administer the questionnaire to a larger number of patients across more Australian facilities. Responses will inform interventions to further improve the knowledge and understanding of hospital-acquired infections of future patients.

## #16. Increased Appetite for Hand Hygiene Day

### Author

Craigie H

### Introduction

World Hand Hygiene Day takes place each year on 5th May. Our aim this year was to raise our community's awareness of hand hygiene through an innovative approach to activities associated with World Hand Hygiene Day. Concept planning was conducted early in 2014. World Hand Hygiene Day activities targeted our patients, staff and the wider community in North West Tasmania. The activities we planned were able to be adapted to suit both the acute and primary health sites within our Health Service.

### Discussion

Patient activities at the acute hospitals centered on food. A hand shaped biscuit accompanied by an information brochure was distributed to all inpatients at morning tea. Clinical staff also received the hand shaped biscuits for morning tea. Distribution of the biscuits facilitated impromptu reminders about the 'What, Where and How' of hand hygiene along with the enjoyment of eating the biscuits.. Wider community awareness about hand hygiene was facilitated with an article and photograph in the local daily newspaper, 'The Advocate'. The article discussed the hospital's use of the hand shaped biscuits to raise awareness of hand hygiene on World Hand Hygiene Day. The article also included a reminder to the public of the importance of hand hygiene. Public displays were developed by the infection control teams and displayed in the foyers of the Mersey Community Hospital and the North West Hospital Burnie. The displays included Hand Hygiene Australia and WHO Hand Hygiene Day promotional material, together with local compliance data. Paediatric patients at North West Regional Hospital decorated paper hands and these embellished the public display. Staff at Mersey Community Hospital actively competed in a poster competition addressing the theme "It takes just 5 moments to change the world: clean your hands stop the spread of drug resistant germs." Joint winners were the Outpatient Department and the Education/Administration corridor.

### Conclusion

We raised the profile of hand hygiene on World Hand Hygiene Day 2014 in both our hospitals and community with the use of food supported by print media, posters and foyer displays. The 550 hand shaped biscuits were well received and remembered.

## #17. Knowledge, Attitudes and Practice of Hand hygiene among Parents of Nursery Children in Ampang, Selangor- a pilot study

### Author

Mohamed N

### Introduction

Infections spread easily among children in nurseries due to overcrowding and their natural intimacy. Contact transmission is preventable through proper hand hygiene and good sanitation. This is a pilot study that evaluated knowledge, attitudes and practice (KAP) of hand hygiene among parents. Further study will focus on KAP among parents and caregivers in nurseries and its association with *Staphylococcus aureus* nasal carriage.

### Methods

This cross-sectional study involved 30 university support staff who sent their kids to nurseries. Participants were given questionnaires consisting statements related to personal hand hygiene, hand hygiene practices during the care of children and infection related to poor hand hygiene.

### Results

The mean score for knowledge of hand hygiene was  $2.71 \pm 0.257$  out of 3. Meanwhile, the mean score for attitude and practice of hand hygiene were  $4.59 \pm 0.395$  out of 5 and  $4.54 \pm 0.362$  out of 5 respectively.

### Discussions

Overall results showed that majority of parents had a good understanding of hand hygiene. However more effort is needed to ensure good hand hygiene technique is taught as early as in nurseries and practiced in the community. This is very important for prevention of communicable diseases in the community.

## #18. Knowledge, attitude and practices regarding personal hygiene of food handlers in kuala lumpur, malaysia: a pilot study

### Author

Ramli S

### Abstract

Foodborne diseases have caused a significant morbidity and mortality around the world. Food safety is an increasingly important public health issue since years ago until now. Food handlers have a major role in the prevention of food poisoning during food production and distribution. However, food contamination by food handlers could occur and leading to foodborne diseases if they lack of knowledge and neglect of their personal hygiene on food handling practices in their premises. This study was aimed to assess the level knowledge, attitude and practices among food handlers in Kuala Lumpur. A cross sectional study was out on 30 of food handlers. The information consisting of demographic, knowledge, attitude and practices on personal hygiene were collected using self-administered questionnaire. Overall results showed that majority of the food handlers had a good knowledge, attitude and practices on personal hygiene. Analyzed data obtained stated that mean score for knowledge is 2.840.10 out of total 3 respectively, attitude is 4.380.25 and practices is 4.370.68 out of total 5 respectively. This study revealed that, although food handlers personal hygiene knowledge, attitude and practices were good, some of the hygiene aspects need to be emphasized. However, more effort is needed such as continuous education and food safety training should be provided periodically and frequently in order to minimize foodborne hazards.

Key words : food handlers, knowledge, practice

## #19. Effect of climatic factors on dengue incidence: post-monsoon season surveillance a must

### Authors

Chakravarti A<sup>1</sup>, Roy P<sup>1</sup>, Siddiqui O<sup>1</sup>, Kumar S<sup>1</sup>

1. Maulana Azad Medical College, New Delhi, India

### Background

Dengue is a major arboviral disease in India. Delhi, capital of India, is home to more than 22 million people and is endemic for dengue. Rainfall, temperature and humidity are suggested as important factors attributing towards growth of dengue vector, *Aedes aegypti*, and potential of dengue outbreaks.

### Objectives

This study was done to find out relationship of incidence of dengue with climatic factors such as rainfall, temperature and humidity over the three year period from 2011 to 2013 in Delhi.

### Methods

Blood samples were collected from 8026 patients experiencing a febrile illness clinically consistent with dengue infection. Serum samples of the study subjects were analyzed for dengue NS1 antigen and IgM antibody by ELISA. Monthly data of total rainfall, temperature and relative humidity were obtained for the study period and retrospectively analyzed. Statistical analysis was done using GraphPad Inc. statistical software. Statistical significance was defined as P value lesser than 0.05. Results: Out of the 8026 suspected cases, 3739(46.59%) were confirmed as serologically positive. According to intensity of rainfall, weather data was divided in three periods, namely; pre-monsoon, monsoon and post-monsoon. The difference in rainfall and temperature between the three periods was significant. The difference between serologically positive cases compared to serologically negative ones was significantly higher in the post-monsoon period compared to the other two periods. Majority of the positive cases were reported in the post-monsoon period. This rightward shift of dengue outbreak in relation to the weather graph of the city continued till the end of November, even though monsoon ended in September.

### Conclusions

This study highlights rainfall, temperature and humidity as important climatic factors which can alone or collectively be responsible for dengue outbreaks. Peaking of dengue fever outbreak was seen in post-monsoon period suggesting need of continuous dengue surveillance well beyond after end of monsoon.

## #20. The Development of an Evidence Based Resource for Infection Control

### Author

Xue Y

### Background

A clinician wanting to practice evidence-based healthcare requires access to clinically relevant, regularly updated, pre-appraised summaries of the evidence. These summaries are often available in online evidence retrieval systems, which have been shown to improve the ability of clinicians to access evidence in responding to clinical problems. There currently exists a need for evidence-based information and tools in infection control.

### Aim

To establish an evidence based resource to assist professionals working in infection control to practice evidence based healthcare.

### Methods

An engaged group of infection control practitioners was established to act as a steering committee for this resource by the Joanna Briggs Institute (JBI). This evolved into a tiered international reference group to provide feedback, topic suggestions, and content for the resource. Resources were developed systematically based upon an agreed taxonomy, and included evidence summaries, recommended procedures, audit criteria and information for consumers/patients.

### Results

As of 2014, the resource is now available online. There are 188 evidence summaries covering a wide range of infection control topics online, 102 recommended practices, 11 audit topics and 28 consumer information pamphlets.

### Conclusion

This paper outlines the details and processes surrounding the development of the JBI Infection Control Node, and how it has grown from humble beginnings into a resource that can assist in the translation of evidence into practice for infection control professionals.

## #21. What influences Multi Resistant Organism (MRO) colonisation in a Rural Critical Care Unit?

### Author

Lovell Smart S

### Abstract

The Critical Care Unit (CCU) of Orange Health Service (OHS) was a combined unit of Coronary Care, High dependency and Intensive Care patients up until the hospital moved to a new facility in March 2011. The Clean Hands saves lives compliance was launched at OHS in 2008 with the 5 moments implemented in 2009. The CCU had an outbreak of MROs in 2008 and 2010 and the hand hygiene compliance within the unit has increase from 50% to 76% over this time. All patients admitted to unit have been screened for multi resistant staphylococcal aureus MRSA/ Vancomycin Resistant Enterococci (VRE) from 2010 on admission and discharge with a greater 75% compliancy to screening. The incidence of isolation of MRSA has dropped to almost zero while the colonization of (VRE) remains variable from month. What other factors contribute to continued VRE colonization with MRSA eradication besides hand hygiene in CCU? No individual practice has provided evidence to prove effective in the management of MRO's, however a bundle approach is proving to be effective and sustainable in the CCU.

POSTER ABSTRACTS



## #22. Creating a methodology for faecal microbiota transplant using readily available equipment on an infectious disease ward

**Author**  
McQuilty M

### Abstract

Rates of infection with *Clostridium difficile* have increased around the world, paralleling the use of broad-spectrum antibiotics. Because treatment has always been hamstrung by high recurrence rates, ongoing effort has been put into the development of better therapeutic strategies. The non-pharmaceutical technique of faecal microbiota transplantation has been sporadically reported over the last forty years, but interest in the technique increased exponentially when a randomized trial published in 2013 demonstrated its clear superiority to standard treatment. Faecal microbiota transplantation had not previously been attempted in this facility, and no policy, procedure or work unit guideline existed. Concerns about infection control issues, such as the location of transplant and preparation area, waste disposal, aerosolisation of faecal matter and additional precautions required were among some of the first concerns raised. The first transplant was also an opportunity to begin to develop a methodology that addresses these infection control issues and possibly a policy at some stage in the future. Using the published protocol from the randomized trial, discussion between the medical and nursing staff, a blender and a number of items found routinely on most medical/surgical wards, the first transplant occurred. We developed a workable protocol that could safely be carried out in most clinical areas of the infectious disease ward, which also addressed any infection control issues. The first transplant led to a clinical cure, and others have been performed using the methodology developed here, including referral from the gastroenterology unit. The outcome is that specialized and expensive equipment is not required and most medical/surgical wards will have the equipment required readily available in their wards at the current time. By using contact and droplet precautions, the infection control risk is negligible. The transplant is now achievable as an outpatient procedure, saving inpatient bed days and cost.

## #23. What do clients, cookies and hand hygiene have in common?

### Author

Horne T

### Introduction

World Hand Hygiene Day (WHHD) takes place each year on 5th May. WHHD is declared by the World Health Organization (WHO) and encourages patients and their family members to join health workers in an effort to practice good hand hygiene. According to WHO, every year, hundreds of millions of patients around the world are affected by health care-associated infections. More than half of these infections could be prevented by caregivers properly cleaning their hands at key moments in patient care – in accordance with the 5 moments of hand hygiene.

### Discussion

Posters by their very nature are intended to be a way of exposing people to a persuasive message with the intention of increasing awareness and bringing about a change in attitude and behavior. The Adult Day Centre (ADC) clients of the Tasmanian Health Organization-North West of Tasmania were asked to design posters, showing the importance of hand hygiene as they understood it. A total of 16 posters were received from the ADC. All of which included clear messages relating to the concepts of hand hygiene. The posters were collected a week before WHHD allowing time for them to be copied, laminated and distributed to other Primary Health and Mental Health Services ready to be exhibited on May 5. The posters were forwarded to the Tasmanian Infection Prevention and Control unit for judging and to determine which posters would be professionally printed for wider display. The ADC clients also baked hand shaped cookies which were shared with the Community Health Centre staff. In addition posters, pens, tissues, word finders and the THO- North West media statement and WHHD flyer were left for staff and clients to enjoy.

### Conclusion

ADC clients have a basic knowledge of the concepts of hand hygiene and its importance in stopping the spread of infection and disease. The posters were presented to the THO-North West Consumer Reference Group where 5 have been selected to become THO-North West hand hygiene posters.

## #24. Knowledge, Attitudes and Practice of Hand hygiene among Parents of Nursery Children in Ampang, Selangor- a pilot study

### Author

Mohamed N

### Introduction

Infections spread easily among children in nurseries due to overcrowding and their natural intimacy. Contact transmission is preventable through proper hand hygiene and good sanitation. This is a pilot study that evaluated knowledge, attitudes and practice (KAP) of hand hygiene among parents. Further study will focus on KAP among parents and caregivers in nurseries and its association with *Staphylococcus aureus* nasal carriage.

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### Discussions

Overall results showed that majority of parents had a good understanding of hand hygiene. However more effort is needed to ensure good hand hygiene technique is taught as early as in nurseries and practiced in the community. This is very important for prevention of communicable diseases in the community.

## #25. Optimising the collection of infection data in residential aged care

### Author

Fowler L

### Abstract

The standard collection form used in residential aged care to inform infection prevention personnel and management about infections in residents is tabular, uninviting and badly completed. It seems that the more information required the less that is gathered. This means the infection prevention nurse has to march around to all locations asking who had an infection in the past month and checking who was prescribed antimicrobials. To alleviate this problem at Bairnsdale Regional Health Service (BRHS) we thought that a redesign of the collection method was needed. Information gathering had to be simple to undertake and attractive to complete. Also it needed to provide instant feedback so that a developing outbreak could be readily identified at a glance by the nurses managing the residents. As Residential aged care lacks the latest, sexiest information technology interfaces and rarely has the resources to even contemplate such things as iPads, the humble paper form was envisaged as the simplest way of moving forward. The new method had to collect essential information about infections. As room location is closely associated with transmission of infection we decided to try mapping the bed locations onto a form. The result was a series of forms each demonstrating the geographical association of beds for each wing of the facility. We wanted to avoid using antibiotic prescribing as an infection signal because it was too likely to miss infective events. Instead we opted for signs and symptoms of infection with a gastrointestinal, respiratory, urinary, skin or eye origin. Simplicity was needed to make this workable so a colored dot was allocated according to the infection origin. In use the form functions as follows: on suspecting an infection a dot of the appropriate color is placed in the bed space and the date recorded. The dots develop an epidemiological map showing where infections are arising over time. This form has the potential to alert both minimally trained staff and managers to infection spread and outbreaks in an aged care facility much sooner and lead to quicker application of effective interventions to limit the spread.

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