



## **INFECTION CONTROL ASSOCIATION (SINGAPORE)**

### **Summary Report on AICA – 5<sup>th</sup> Biennial National Infection Control Conference Melbourne, 8 – 10 October 2008**

#### **Introduction**

The 5<sup>th</sup> Biennial Australian Infection Control Conference was held in Melbourne, Australia from 8 to 10 October 2008. There were 530 delegates from around Australia, China, India, Singapore and Thailand to participate in this conference theme, Challenge Resistance. It recognizes the many challenges faced by infection control professionals as we put our efforts to provide safer healthcare.

#### **Learning objectives**

1. To learn from international experts on their experience and expertise in infection prevention and control in healthcare.
2. To meet and interact with delegates from healthcare settings in Australia and other countries.

#### **Sessions attended:**

##### **A. Plenary Session – Keynote address**

1. Ontario in the post-SARS Era, Rebirth of Public Health and Infection Control – Dick Zoutman

In this session, it described on the experience of SARS in a Canadian Hospital and how it has advanced and developed post SARS. The hospital staff teamed up to form 'sweat shop' and debated on the use of personal protective equipment. They developed 103 recommendations to be implemented in 5 yrs that included the following:

- Infection Control staffing 1:100
- Regional Infection Control Network that facilitates and enhance coordination of infection control activity
- Infectious Diseases Advisory Committee to provide expertise on vaccines
- Facility design to provide negative pressure
- Best practice manual

- Advisory support to emergency unit on admission criteria
- 4 moments of hand hygiene instead of 5 for better compliance
- Public reporting of Hospital Acquired Infections such as ventilator associated infections, central vascular catheter associated blood stream infections and hand hygiene compliance
- Integrate surveillance of infection so that information is pass to practitioner as feedback is important

## 2. Brave New World-Antimicrobial Resistance – Trish Perl

This session discussed on the increasing prevalence and incidence of multiply resistant organisms (MRO) that are emerging in health care. World wide MRSA prevalence is about 80 percent and in Australia, MRSA is community acquired and is endemic. VRE is also a problem and worldwide 17 % of the VRE strain is resistant. There is an increase in incidence of C Difficile with emergence in the community setting. Prevention and control of MRO requires multidisciplinary approaches such as:

- Hand hygiene
- Isolation/cohort
- Barrier use
- Control of environment using hydrogen peroxide vapourisation
- Antibiotic stewardship

## 3. The Road to Zero Blood Stream Infection Surveillance: How performance improvement methods can serve as your road map – Amy Richmond

Performance improvement methods such as LEAN Engineering and Six Sigma can be applied to prevent blood stream infections. A hospital in USA used these techniques to understand and redefine the processes that surround the care of a patient with CVC leading to a reduction of risk factors and safer patient care by targeting zero.

Targeting Zero is:

- A culture, a goal, an attitude and a commitment over time
- Not accepting benchmark
- Eliminate harm
- Telling healthcare worker what to do
- Plan a program in getting to zero
- System a model to engineer reduction of infection
- Use LEAN Engineering to get rid of waste and
- Six Sigma to get rid of variation

#### 4. AICA Future Directions – Claire Boardman, AICA President

The future direction to raise the profile of Infection Control Professionals (ICPs) throughout Australia was discussed. Issue regarding the importance of credentialing has stimulated a debate amongst the ICPs in Australia. Initiatives for AICA were defined as follows:

- National Surveillance System
- Infection Control guidelines
- Hand hygiene
- Building clinician capacity
- Antibiotic utilization
- Developing competency standards and reference framework

#### 5. Why do they do it – Bad habits are hard to break – Deborah Macbeth

Results of numerous studies have identified poor compliance in adherence with infection control principles among healthcare workers. Hand hygiene compliance ranged from 5 to 80 percent averaging at 40 percent. It is a significant factor that contributed to healthcare acquired infection. Various strategies used alone or in combination to improve practice include surveillance and feedback, education and engineering controls. The results of an ethnographic study that used participant observation and interviews to explore the influence of clinical culture on infection control practice indicated that change is more likely to achieve if the motivation and impetus for change is culturally based.

What is culture? It is common to and shared by group:

- Artifacts
- Beliefs
- Attitudes
- Language
- tradition

Cultural influence on practice is unique to each clinical context, agreed by clinician, reinforced by peer pressure and be supported by physical environment.

### **B. Concurrent Sessions**

#### 1. National reporting of Healthcare-associated Staphylococcus aureus bloodstream infection (HA-SAB) – Dr John Ferguson

It is mandatory in United Kingdom to measure all Bloodstream infections caused by Staphylococcus aureus including MRSA. Surveillance methodology is laboratory driven and the Infection Control Practitioner (ICP) evaluates its significance. This surveillance data is analyzed and

effort to reduce healthcare associated MRSA infection included a root cause analysis of each episode.

The Australian Commission on Safety and Quality in Healthcare has coordinated a review of healthcare associated surveillance priorities in Australia culminating in the release of a report and the top level recommendation for national reporting of HA-SAB

## 2. Staph-aureus Bloodstream Infection Surveillance (AUSAB) -Rhea Martin

A 27-month prospective hospital wide programme was commenced in Austin Health with the aim to improve patient safety and report all AUSAB. Each episode of infection is investigated using root cause analysis and report nationally. During the crash investigation, it was found that:

- 92% had line infections
- 85% within 10 days of line insertion
- 100% were inserted at radiology

System issues were discovered:

- No maximal sterile barrier technique
- Inadequate infection control training
- Increase numbers of line insertion resulting in 'super highway' for bugs to travel

The system issues were addressed with education of staff, implementing the CVC bundle including the checklist.

In the oncology ward, the number of late line infections was found due to poor access technique, poor compliance in hand hygiene and inappropriate line dressing. A central line team was formed just for line insertion using bio-patch and '2 minutes' to save a life:

- 10 secs hand hygiene
- 50 secs barrier technique
- 30 secs Chloraprep use
- 30 secs drying time

With the '2 minutes' to save a life which is considered priceless, the infection rate had reduced from 2.66 per 1000 patient days to 0.65 per 1000 patient days.

## 3. Using an IT platform for HAI surveillance: the VICNISS SHiNe story – Judith Brett

The VICNISS is a funded programme set up to monitor hospital acquired infections in the Victorian public hospitals. Using the same surveillance methodologies as the CDC in USA, the VICNISS monitors surgical site infections, ICU central line associated bacteraemias and ventilator associated pneumonias. Data from each participating hospital is forwarded to the VICNISS coordinating Centre for risk stratification and aggregation. As surveillance is a time consuming task of gathering and

entry of data, an IT platform is used to extract and collate this information. The implementation of IT software has increased efficiency of surveillance activities, reduced duplication and data errors.

4. Improvements to hand hygiene compliance outcomes 24 months after a state-wide role out – Kelvin Heard, Kaye e Bellis

This was a state-wide project in Victoria to assess hand hygiene compliance rates. 86 public health services participated in this multimodal, hand hygiene culture challenge programme over a 2 year period. The rates were collected using a standardized compliance tool via observational studies by trained staff. Observations are collected for the total number of moments observed and the total number of performed hand hygiene. Compliance rate are calculated by percentage and data submitted to hand hygiene unit in Victoria electronically and in hard copies on a quarterly basis for collation, verification and feedback. The result shows that 74% of the Victorian public health services have reached 55% or above in their 'Start Clean Strategy'. The overall hand hygiene compliance rate following the state-wide roll out has gone up from 47.69% to 58.58%. It is important to maintain and improve hand hygiene compliance and sustainability by giving timely feedback using local data and continual education on hand hygiene awareness.

5. To determine whether a structured method of documentation positively affected clinical practice to reduce BSI rates – Marija J Juraja

There was no structured approach in documentation of peripheral intravenous line therefore It was difficult to determine whether sepsis occurs at insertion or post insertion line care. In this study, an IV audit tool is formulated to capture the following:

- Insertion date
- Inserter
- Daily observation of the site and
- Line change

The infection control team and the link nurses undertook the study and the criteria was any patient that had a peripheral IV inserted in the ED and had been an inpatient for greater than 48 hours was audited using the IV audit tool. The result revealed that 41% of the patient had no documented evidence of insertion date and 43% had no documentation of inserter. Almost 31 % of patients had no evidence of daily documentation on their IV site and 72% had no documentation of when the line was due for changing. Therefore with no structured documentation it was difficult to determine where sepsis occurred. The study concluded that staff had limited knowledge on the causes of sepsis and hospital is responsible to ensure good documentation as it reflects safe patient care. A multi-

disciplinary structured documentation form was developed to reflect good clinical practice and improved compliance.

### **Conclusion**

There are many plenary sessions and the concurrent sessions are running parallel in various lecture rooms. We need to choose and identify the most appropriate topics of interest to attend. The lectures are challenging and enriching. The knowledge and skills shared at the conference is extremely valuable for Infection Control Practitioners (ICPs) to translate into practice in their healthcare institutions.

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