

## CHAPTER 1: Surveillance and quality improvement

### **What the experts say.**

- ♦ All health care facilities require HAI surveillance systems as these are proven to reduce infection rates when local data collection results in timely feedback

### **Why is this important?**

- ♦ HAI causes pain and suffering to patients, uses up valuable resources and can be prevented

### **What can we do to improve?**

- ♦ Each healthcare facility should collect and report surveillance data to drive quality improvement in the management of HAI.

### **Who could take the lead?**

- ♦ Health care regions and networks lead on surveillance systems

## QUESTIONS

What are the implementation issues from a local and /or national perspective?

Who should be responsible for the management of this recommendation?

What issues require priority attention?

Comment:

## CHAPTER 2 : Bloodstream Infections

### What the experts say

- ♦ A mandatory continuous national surveillance system is required to collect and report an agreed minimum data set for:
  - (a) Staphylococcus aureus bacteraemia, including methicillin-resistant Staphylococcus aureus (MRSA);
  - (b) Central line-associated-blood stream infections (BSI) in all ICUs, and;
  - (c) Haemodialysis access-associated blood stream infection (BSI).
- ♦ Australian expert consensus is required to agree on national definitions for intravascular device-associated bloodstream infections and methods for calculation of infection rates.
- ♦ All healthcare settings should take action to monitor and reduce incidence of intravascular device-associated bloodstream infections.

### Why is this important?

- ♦ Bloodstream infections are common and cause significant illness and death; more than half of these infections are associated with healthcare procedures
- ♦ Patients who develop bloodstream infections more likely to die and suffer complications during their hospital stay; they will also stay in hospital longer, increasing the cost of hospitalisation
- ♦ Quality improvement programs have resulted in sustained decrease in intravenous sepsis.

### What can we do to improve?

- ♦ Develop locally based systems using national consensus based guidelines for definition and agreed data set.
- ♦ Develop methods of calculation for IV device related BSIs to monitor and reduce the incidence of IV device associated BSI

### Who could take the lead?

- ♦ Healthcare regions and networks lead on data collection
- ♦ National body with a safety and quality focus be identified to collate regional data collections

## QUESTIONS

What are the implementation issues from a local and /or national perspective ?

Who should be responsible for the management of this recommendation?

What are the priority issues?

Comment:

## CHAPTER 3: Surgical site Infections

### What the experts say

- Local surveillance of surgical site infection (SSI) and infecting pathogens should be undertaken.
- Surveillance should include all coronary artery bypass graft surgery, major joint prosthesis insertion, other important surgeries (in terms of surgical frequency, or surgical site infection morbidity; eg. Lower segment caesarean section), and procedures locally noted to have higher than expected SSI rates.
- Standard NHSN (NNIS) surveillance methodology (i.e. definitions of infection and detection methodologies) should be used
- Staff need to be trained in data collection, audit and surveillance
- Post discharge surveillance data requires development of a validated, cost-effective method

### Why is this important?

- There is significant morbidity, mortality and cost associated with SSI.
- There is an inconsistent approach across Australia to SSI surveillance

### What can we do to improve?

- Develop standard national definitions and surveillance methodologies
- Establish local data systems to provide timely and reliable feedback for clinicians.
- Staff undertaking surveillance have access to education in data collection, audit and surveillance.

### Who could take the lead?

- The ACSQHC leads development of consensus national definitions and surveillance methodologies
- Individual health services lead on localised data collection and feedback systems
- Accreditation agencies or funders incorporate performance measures for SSI.

## QUESTIONS

What are the implementation issues from a local and/or national perspective?

Who should be responsible for the management of this recommendation?

What are the priority issues?

Comment

## CHAPTER 4 : Neonatal infection – early onset

### What the experts say.

- All birthing services should measure and report the incidence and mortality from early onset bacterial sepsis( including meningitis)

### Why is this important?

- Early onset sepsis in neonates is a significant problem for birthing services in Australia

### What can we do to improve?

- Develop surveillance systems to improve diagnosis and management of early onset sepsis

### Who could take the lead?

- Healthcare regions and networks lead on local surveillance systems

## QUESTIONS

What are the implementation issues from a local and/or national perspective?

Who should be responsible for the management of this recommendation?

What are the priority issues?

Comment

## CHAPTER 5: Healthcare worker blood borne virus exposure

### **What the experts say:**

- ♦ A national surveillance system for monitoring trends in occupational exposure to blood borne pathogens should be developed

### **Why is this important?**

- ♦ Occupational exposure causes a substantial burden and cost to both health systems and individuals

### **What can we do to improve?**

- ♦ Develop a standardised national system for collection and analysis of occupational exposure data
- ♦ Develop a feedback process to local health facilities

### **Who could take the lead?**

- ♦ National body with a safety and quality focus to implement a standardised national system for occupational exposure

## QUESTIONS

What are the implementation issues from a local and/or national perspective?

Who should be responsible for the management of this recommendation?

What are the priority issues?

Comment

## CHAPTER 6: Multi-resistant organisms

### What the experts say

- ♦ A mandatory continuous national surveillance system is required to collect and report an agreed minimum data set for
  - (a) Staphylococcus aureus bacteraemia, including methicillin-resistant Staphylococcus aureus (MRSA);
  - (b) A feasibility study of reporting all healthcare associated MRSA infections, using the established Australian Infection Control Association multi-resistant organism indicators definitions should be explored
  - (c) A comprehensive laboratory based surveillance program for antibiotic resistance as recommended by the NHMRC is required
  - (d) A sentinel screening program in high-risk patient groups (e.g. ICU patients) for key resistance genes, including strongly linked resistances (amino glycosides and fluoroquinolones) in Gram-negative bacilli is required.
- ♦ Training programs for Australian laboratories to promulgate best practice methodologies for resistance detection and reporting in organisms responsible for healthcare associated infections (MRSA, VISA/VRSA, VRE, and MRGNs) are required.

### Why is this important?

- ♦ Antibiotic resistance in the community is emerging as a significant problem worldwide, but Australia has few ways of measuring this.
- ♦ Antimicrobial resistance contributes to poor patient outcomes and threatens to undermine the advances in treatment of infectious diseases.

### What can we do to improve?

- ♦ Local surveillance solutions should be based on a nationally agreed minimum data set.
- ♦ Training programs for Australian laboratories should be developed to ensure uptake of best practice methodologies for detection and management

### Who could take the lead?

- ♦ Healthcare regions and networks lead on data collection
- ♦ National body with a safety and quality focus be identified to collate regional data collections

## QUESTIONS

What are the implementation issues from a local and/or national perspective?

Who should be responsible for the management of this recommendation?

What are the priority issues?

Comment

## CHAPTER 7: Clostridium difficile- associated disease

### What the experts say.

Early warning and response capabilities for C. difficile-associated disease should be developed to include:

- ♦ reporting of severe cases to jurisdictions and nationally; and,
  - ♦ ensuring culture for C. difficile occurs across a wider spectrum of laboratories
2. Strain typing and surveillance for C. difficile is required nationally including testing for the presence of the emerging, highly virulent NAP1 / 027 strain.
  3. C. difficile surveillance results should be linked with antibiotic use data from each facility to highlight specific drivers of local C. difficile incidence
  4. National guidelines for prevention, control and outbreak management of C.difficile-associated disease including isolation should be accessible and current

### Why is this important?

- ♦ *C. difficile* related to antibiotic use is a common HCA infection that has particular significance for already infected patients in hospitals and long term care facilities.
- ♦ In Australia there is an inconsistent approach to the identification and management of *C. difficile*.

### What can we do to improve?

- ♦ Develop early warning and response capabilities that incorporate guidelines for the prevention, control and outbreak management.
- ♦ Develop a surveillance system linked to antibiotic usage
- ♦ There will be a process for national reporting and widespread access to facilities for culture.

### Who could take the lead?

- ♦ Healthcare regions and networks lead on data collection
- ♦ National body with a safety and quality focus be identified to collate regional data collections
- ♦ NHMRC consider the development of national guidelines for C. difficile-associated disease as a priority

## QUESTIONS

What are the implementation issues from a local and/or national perspective?

Who should be responsible for the management of this recommendation?

What are the priority issues?

Comment

<b>CHAPTERS 8 and 9:</b>	<b>Respiratory syncytial virus infection</b>
	<b>Rotavirus infection</b>

**What the experts say**

- ♦ Monitoring and prevention of hospital acquired paediatric cases of Respiratory syncytial virus and Rotavirus should be based on laboratory-confirmed results specific to each .

**Why is this important?**

- ♦ Respiratory syncytial virus is the leading cause of paediatric lower respiratory tract infections and related hospitalisations and of HAIs in infants and young children.
- ♦ Rotavirus is the major agent of hospital-acquired diarrhoea particularly in young children and neonates
- ♦ Lack of effective surveillance systems limits ability of healthcare facilities to monitor occurrence and spread

**What can we do to improve?**

- ♦ Implement infection control programs to monitor the annual seasonal onset of community acquired respiratory syncytial virus and community acquired rotavirus and use laboratory confirmed results to monitor and prevent the spread of hospital acquired cases

**Who could take the lead?**

- ♦ Healthcare regions and networks lead on implementation of infection control programs.

<b>QUESTIONS</b>
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What are the implementation issues from a local and/or national perspective?

Who should be responsible for the management of this recommendation?

What are the priority issues?

Comment

## CHAPTER 10: Adult intensive care acquired infections

### What the experts say

- A mandatory continuous national surveillance system to collect and report on an agreed minimum data set for central line-associated- blood stream infections in all ICUs is required.
- Australian expert consensus is required to agree on national definitions for central line-associated bloodstream infections and methods for calculation of infection rates.
- Evidence based strategies for HAIs should be utilised to target central line associated bloodstream infections and ventilator-associated pneumonia. This will include standardized application and auditing of compliance.
- Monitoring of national antibiotic usage and resistance surveillance data, resistance management, and intervention strategies requires a comprehensive integrated surveillance program.
- Expansion of the national antibiotic utilization data obtained from hospital pharmacies should include data from all ICUs

### Why is this important?

- Patients in ICUs are at high risk of HCA infections, in particular central line-associated blood stream infection and ventilated associated pneumonia
- There is no integrated national surveillance system to monitor ICU infections, antimicrobial resistance or antibiotic resistance.

### What can we do to improve?

- Review and standardise definitions of Central Line Associated Bacteraemia and Ventilator-Associated Pneumonia.
- Establish national and local surveillance systems .
- Use evidence based strategies to manage Central Line Associated Bacteraemia and Ventilator-Associated Pneumonia

### Who could take the lead?

- The ACSQHC leads development of consensus national definitions and surveillance methodologies
- Healthcare regions and networks lead on local surveillance systems
- National body in with a safety and quality focus in collaboration with ANZICS lead on national surveillance systems

## QUESTIONS

What are the implementation issues from a local and/or national perspective?

Who should be responsible for the management of this recommendation?

What are the priority issues?

Comment

## CHAPTER 11: Neo - natal intensive care

### What the experts say:

- ♦ The 2003 AHCS/ANZNN late onset neonatal sepsis indicators (blood stream infection and meningitis) require revision.
- ♦ Standardised indications and methods for collection of blood and cerebro-spinal fluid cultures from neonates are required
- ♦ Benchmarking of neonatal intensive care surveillance data is required. Neonatal ICUs should measure and report antibiotic resistance and usage. The development and updating of prescribing guidelines and other aspects of antibiotic stewardship should be based on analysis of antibiotic resistance and usage.

### Why is this important?

- ♦ Lack of current best practice guidelines and systematic surveillance systems in neonatal ICUs across Australia increases risks for neonates who require ICU management

### What can we do to improve?

- ♦ Update the 2003 AHCS/ANZNN late onset neonatal sepsis indicators and develop surveillance systems to improve identification and management of early onset sepsis
- ♦ Develop standardised indications and methods for collection of blood and cerebro-spinal fluid cultures from neonates to facilitate benchmarking.

### Who could take the lead?

- ♦ AHCS/ANZNN lead on standardised indicators.
- ♦ Healthcare regions and networks lead on local surveillance systems

## QUESTIONS

What are the implementation issues from a local and/or national perspective?

Who should be responsible for the management of this recommendation?

What are the priority issues?

Comment

## CHAPTER 12: Surveillance in smaller hospitals

### **What the experts say?**

There is limited published literature on healthcare associated infections and surveillance programs in smaller hospitals

### **Why is this important?**

Smaller hospitals require alternative surveillance approaches due to the limitations of analysing small sample sizes.

### **What can we do to improve?**

- ♦ A smaller hospitals (<100 acute care beds) surveillance program based on the signal event surveillance program and relevant process indicator measures is required.
- ♦ Smaller hospitals require mechanisms to support staff involved in infection prevention and control through external support networks and alignment of services with infection prevention and control teams from larger hospitals or with regional, state and territory groups.

### **Who could take the lead?**

Researchers, jurisdictions and staff in both public and private small hospitals collaborate on the collection of evidence and identification of solutions for surveillance.

## QUESTIONS

What are the implementation issues from a local and/or national perspective?

Who should be responsible for the management of this recommendation?

What are the priority issues?

Comment

## CHAPTER 13: Residential Care facilities

### What the experts say

- ♦ Long term facilities require a standardised system of local surveillance focusing on processes, such as standard infection control precautions including hand hygiene compliance and device related care.
- ♦ Immunisation status amongst residents and staff, with particular reference to influenza, hepatitis B and hepatitis A should be monitored.
- ♦ Validated Australian definitions for infection surveillance in Residential Care Facilities should be developed

### Why is this important?

- ♦ Residential aged-care facilities residents are at high risk from community and healthcare associated infection.
- ♦ They live in a home-like environment, have close contact with potentially infected or colonised residents and staff, have increased antibiotic exposure and exposure to hospital stays, and are often immuno-compromised

### What can we do to improve?

- ♦ Develop surveillance systems that focus on process measures especially related to hand hygiene and device related care
- ♦ Use data to inform education and training programs for staff

### Who could take the lead?

- ♦ Researchers, jurisdictions and staff in both public and private residential care facilities collaborate on the collection of evidence and identification of solutions for surveillance.

## QUESTIONS

What are the implementation issues from a local and/or national perspective?

Who should be responsible for the management of this recommendation?

What are the priority issues?

Comment

## CHAPTER 14: Hand Hygiene

### What the experts say

- ♦ Repeated monitoring of hand hygiene programs through process measures (e.g. compliance monitoring with the WHO '5 moments for hand-hygiene') and outcome measures (e.g. rates of nosocomial sepsis, using an indicator organism such as MRSA) should be conducted in all healthcare facilities.
- ♦ Alcohol-based products used for hand hygiene must conform to international testing standards EN 1500.
- ♦ All hand hygiene clinical competency assessments should be assessed against the WHO '5 moments for hand-hygiene' guidelines.

### Why is this important?

- ♦ Transfer of microbial pathogens on the hands of healthcare workers is a key driver of healthcare associated infection

### What can we do to improve?

- ♦ Implement alcohol based hand hygiene initiatives to improve compliance
- ♦ Use WHO guidelines to develop audit tools and make hand hygiene audits for process and outcome measures part of normal practice

### Who could take the lead?

- ♦ Healthcare regions and networks lead on local implementation on hand hygiene initiatives

## QUESTIONS

What are the implementation issues from a local and/or national perspective?

Who should be responsible for the management of this recommendation?

What are the priority issues?

Comment

## CHAPTER 15: Antimicrobial usage - monitoring and analysis

### What the experts say

- ♦ Monitoring of national antibiotic usage and resistance surveillance data, resistance management, and intervention strategies requires a comprehensive integrated surveillance program.
- ♦ National antibiotic stewardship guidelines are required for all healthcare settings. Surveillance data should guide the development and updating of prescribing guidelines, decision support systems (including computerised approval systems, clinical guidelines, and education).
- ♦ Antibiotic resistance and usage data should be made available at clinical service, hospital and national levels.

### Why is this important?

- ♦ Comparison with international data shows that Australian usage rates in hospitals are high for some antimicrobial classes
- ♦ Australian antimicrobial usage data are incomplete and are not linked with resistance surveillance data, which limits their potential use.

### What can we do to improve?

- ♦ Comprehensive integrated surveillance systems should be used inform development of AB Stewardship programs that include guidelines, decision support systems and education programs

### Who could take the lead?

- ♦ A collaboration of relevant national bodies develop national antibiotic stewardship guidelines.
- ♦ Healthcare regions and networks implement national antibiotic stewardship guidelines
- ♦ Healthcare regions and networks lead on local surveillance systems
- ♦ National body with a safety and quality focus be identified to collate regional data collections

## QUESTIONS

What are the implementation issues from a local and/or national perspective?

Who should be responsible for the management of this recommendation?

What are the priority issues?

Comment?

## CHAPTER 16: Healthcare worker immunisation

### What the experts say

- ♦ All Australian healthcare workers should be immunised in accord with NHMRC Immunisation Handbook to protect healthcare workers and patients from vaccine-preventable diseases, including influenza.
- ♦ National surveillance of vaccine-preventable infections should include data on employment status as a healthcare worker.
- ♦ Standardised recording of healthcare worker immunity and immunisation status is required.

### Why is this important?

- ♦ Transmission of immunisation-preventable diseases such as influenza, varicella and measles occurs in the healthcare setting.
- ♦ Surveillance of healthcare worker immunisation in Australia is limited to local healthcare units and is inconsistently addressed

### What can we do to improve?

- ♦ Promulgate recommendations from NHMRC Immunisation Handbook 2008 for healthcare worker immunisation.

### Who could take the lead?

- ♦ Jurisdictions support the implementation of policy directives for health worker immunisation.
- ♦ Healthcare regions and networks implement policy directives

## QUESTIONS

What are the implementation issues from a local and/or national perspective?

Who should be responsible for the management of this recommendation?

What are the priority issues?

Comment?

## CHAPTER 17: Economic costs of healthcare associated infections

### What the experts say

- The process of attributing cost to HAI should be expressed in terms of the number of bed days that are released by effective infection-control programmes, as well as any savings in variable costs.

### Why is this important?

- Social and economic costs of infection are difficult to measure.
- Preventing infection can save money by freeing up bed days for other uses.

### What can we do to improve?

- Monitor bed days to measure additional service costs attributable to healthcare associated infections.

### Who could take the lead?

- Healthcare regions and networks lead on surveillance and analysis of additional bed days attributable to healthcare associated infections

## QUESTIONS

What are the implementation issues from a local and/or national perspective?

Who should be responsible for the management of this recommendation?

What are the priority issues?

Comment?