DRAFT

	What the experts say will improve HAI	Why is this important?	What can we do to improve?	Who could take the lead	What will change
CHAPTER 1. **Surveillance and quality improvement**	• All healthcare facilities require HAI surveillance systems as these are proven to reduce infection rates when local data collection results in timely feedback	• HAI causes pain and suffering to patients, uses up valuable healthcare resources and can be prevented.	• Each healthcare facility should collect and report surveillance data to drive quality improvement in the management of HAI	Healthcare regions and networks lead on surveillance systems.	• Clinicians have access to timely, reliable data to effectively manage HAI • Healthcare facilities can measure the effectiveness of facility infection control programs. • There is a reduction in HAI
CHAPTER 2. **Bloodstream infections**	A mandatory continuous national surveillance system is required to collect and report an agreed minimum data set for: • Staphylococcus aureus bacteraemia, including methicillin-resistant Staphylococcus aureus (MRSA); • Central line-associated-blood stream infections (BSI) in all ICUs, and; • 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	• 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	• 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	• Healthcare regions and networks lead on data collection • National body with a safety and quality focus be identified to collate regional data collections	• Clinicians can demonstrate effective prevention of BSI • There will be a reduction in costs associated with IV related BSIs

	What the experts say will improve HAI	Why is this important?	What can we do to improve?	Who could take the lead	What will change
	take action to monitor and reduce incidence of intravascular device-associated bloodstream infections.	• Quality improvement programs have resulted in sustained decrease in intravenous sepsis.			
CHAPTER 3. **Surgical site infections**	• 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	• There is significant morbidity, mortality and cost associated with SSI. • There is an inconsistent approach across Australia to SSI surveillance.	• 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.	• 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.	• Reduced costs associated with SSI • Surgeons will have access to timely and reliable data about their patients. • Performance measurement of health services throughout Australia includes appropriate antibiotic prophylaxis.

DRAFT

	What the experts say will improve HAI	Why is this important?	What can we do to improve?	Who could take the lead	What will change
CHAPTER 5 **Healthcare worker blood borne virus exposure**	• A national surveillance system for monitoring trends in occupational exposure to blood borne pathogens should be developed	• Occupational exposure causes a substantial burden and cost to both health systems and individuals	• Develop a standardised national system for collection and analysis of occupational exposure data • Develop a feedback process to local health facilities	• National body with a safety and quality focus to implement a standardised national system for occupational exposure	• Local healthcare facilities will have access to occupational exposure information for decision making
CHAPTER 6 **Multiresistant organisms**	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	• 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.	• 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	• Healthcare regions and networks lead on data collection • National body with a safety and quality focus be identified to collate regional data collections	• A national strategy for addressing the management of MRO's will be implemented • Antibiotic stewardship will be core business across Australian healthcare facilities

DRAFT

	What the experts say will improve HAI	Why is this important?	What can we do to improve?	Who could take the lead	What will change
	resistances (amino glycosides and fluroquinolones) 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.				
CHAPTER 7 ***Clostridium difficile-associated disease***	1. Early warning and response capabilities for C. difficult-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	• *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.*	• 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.	• 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	• Antibiotic stewardship will guide antibiotic prescription and administration. • Clinicians will have access to guidelines that are accessible and current • There will be reduction in *C. difficile*-associated disease

DRAFT

	What the experts say will improve HAI	Why is this important?	What can we do to improve?	Who could take the lead	What will change
	isolation should be accessible and current				
CHAPTER 8 / 9 **Respiratory syncytial virus infection** **Rotavirus infection**	• Monitoring and prevention of hospital acquired paediatric cases of Respiratory syncytial virus and Rotavirus should be based on laboratory-confirmed results specific to each .	• 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	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.	• Healthcare regions and networks lead on implementation of infection control programs.	• There is a reduction in hospital acquired cases of RSV • Costs associated with RSV are reduced • The effectiveness of facility infection control programs can be measured
CHAPTER 10 **Adult intensive care unit acquired infections**	• 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	• Patients in ICUs are at high risk of HCA infections, in particular central line-associated blood stream infection and ventilated	• Definitions of Central Line Associated Bacteraemia and Ventilator-Associated Pneumonia will be reviewed and standardised. • National and local	• The ACSQHC leads development of consensus national definitions and surveillance methodologies • Healthcare regions	• There will be a reduction in the incidence of ICU acquired infections Local surveillance supports: • improved antibiotic

DRAFT

	What the experts say will improve HAI	Why is this important?	What can we do to improve?	Who could take the lead	What will change
	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	associated pneumonia • There is no integrated national surveillance system to monitor ICU infections, antimicrobial resistance or antibiotic resistance.	surveillance systems are established • Evidence based strategies will be used to manage Central Line Associated Bacteraemia and Ventilator-Associated Pneumonia	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	prescribing and administration and • application of evidence based HAI strategies to mange CLAB and VAP • Controlling the development of antibiotic resistance

DRAFT

	What the experts say will improve HAI	Why is this important?	What can we do to improve?	Who could take the lead	What will change
CHAPTER 4/11 **Neonatal intensive care infection**	• 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. • All birthing services should measure and report the incidence and mortality from early onset bacterial sepsis (including meningitis).	• Lack of current best practice guidelines and systematic surveillance systems in neonatal ICUs across Australia increases risks for neonates who require ICU management • Early onset sepsis in neonates is a significant problem for birthing services in Australia.	• Update the 2003 AHCS/ANZNN late onset neonatal sepsis indicators and develop surveillance methods 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. • Systematic surveillance should include data relating to antibiotic resistance and usage	• AHCS/ANZNN lead on standardised indicators. • Healthcare regions and networks lead on local surveillance systems	• Clinicians have access to antibiotic prescription and administration data for decision making. • Reduction of rates of late onset sepsis and mortality in neonates.
CHAPTER 12 **Surveillance activities in smaller hospitals**	• There is limited published literature on healthcare associated infections and surveillance programs in smaller hospitals	• Smaller hospitals require alternative surveillance approaches due to the limitations of analysing small sample sizes.	• 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	• Researchers, jurisdictions and staff in both public and private small hospitals collaborate on the collection of evidence and identification of solutions for surveillance.	• Effective standardised surveillance in smaller hospitals

DRAFT

	What the experts say will improve HAI	Why is this important?	What can we do to improve?	Who could take the lead	What will change
			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.		
CHAPTER 13 **Residential care facilities**	• 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. • The development of validated Australian definitions for infection surveillance in Residential Care Facilities is required	• 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	• 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	Researchers, jurisdictions and staff in both public and private residential care facilities collaborate on the collection of evidence and identification of solutions for surveillance.	Effective standardised surveillance in residential care facilities

DRAFT

DRAFT

	What the experts say will improve HAI	Why is this important?	What can we do to improve?	Who could take the lead	What will change
CHAPTER 14 **Hand hygiene**	• 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.	• Transfer of microbial pathogens on the hands of healthcare workers is a key driver of healthcare associated infection	• 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	• Healthcare regions and networks lead on local implementation on hand hygiene initiatives	• There will be reduction in infection rates attributable hand hygiene compliance
CHAPTER 15 **Antimicrobial usage: monitoring and analysis**	• 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	• 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	• Comprehensive integrated surveillance systems should be used inform development of AB Stewardship programs that include guidelines, decision support systems and education programs	• 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	• Nationally there will be consistent and appropriate use of antibiotics

	What the experts say will improve HAI	Why is this important?	What can we do to improve?	Who could take the lead	What will change
	guidelines, and education). • Antibiotic resistance and usage data should be made available at clinical service, hospital and national levels.	potential use.		systems • National body with a safety and quality focus be identified to collate regional data collections	
CHAPTER 16 **Healthcare worker immunisation**	• 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.	• 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	• Promulgate recommendations from NHMRC Immunisation Handbook 2008 for healthcare worker immunisation.	• Jurisdictions support the implementation of policy directives for health worker immunisation. • Healthcare regions and networks implement policy directives	• Decrease in spread of vaccine preventable infections to patients and other staff.
CHAPTER 17 **Economic costs of healthcare associated infection**	• 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.	• Social and economic costs of infection are difficult to measure. • Preventing infection can save money by freeing up bed days for other uses.	• Monitor bed days to measure additional service costs attributable to healthcare associated infections.	• Healthcare regions and networks lead on surveillance and analysis of additional bed days attributable to healthcare associated infections	• Health services will know the impact of infection control programs. • Surveillance information is used in clinical and management decision making.

DRAFT