TASMANIAN INFECTION PREVENTION & CONTROL UNIT

Tasmanian Healthcare Associated Infection - Explanatory Report

Companion document to the Tasmanian HAI Surveillance Report

Version 2.0

Department of Health and Human Services

Tasmania
Explore the possibilities

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Notes

Commonly used terms and acronyms are defined in the Glossary section at the end of this report

Images of microorganisms used in this document supplied courtesy of the Microbiology Department of the Royal Hobart Hospital.

Contents

Introduction

The Tasmanian Infection Prevention and Control Unit (TIPCU) produce regular reports containing information on healthcare associated infections (HAIs). Healthcare associated infections are infections that result as an unintended consequence of receiving healthcare. The reports produced by the TIPCU contain numbers and rates of infections caused by key organisms, responsible for many HAIs. This document has been developed to explain the impact these infections have on patients, why and how the TIPCU has undertaken surveillance of them and what the rates in the reports mean.

Current Situation

Modern healthcare has brought unprecedented benefits to generations of patients and their families. Lives are saved, diseases cured, survival prolonged, quality of life enhanced - all on a scale that could not have been foreseen years ago. However as a recipient of healthcare a patient faces risks as well as benefits. The awareness of the importance of HAIs is not new. In Florence Nightingale's 'Notes on Nursing' in the 1860's she discussed the importance of hygiene, cleanliness and standards of care. Using these principals she dramatically cut infection related death rates in a military hospital in the Crimea.

Today, hospitals and other healthcare settings around the world still face challenges related to HAIs. They are in part the price modern society pays for advances in medical technology and treatment. It is important to understand that these infections cannot be completely eliminated, but they can certainly be reduced through a range of infection control and hygiene measures supported by appropriate education.

<u>Facts about HAIs in Australia and around the world</u>

- Up to 8% of hospitalised patients will acquire an infection during their hospital stay. Some of these infections may be life threatening
- In Tasmania, there are an estimated 2312 HAIs each year, equating to 25 766 lost bed days each year (Cruickshank & Ferguson, 2008)
- The emergence of strains of bacteria that are resistant to many antibiotics is making treatment of many of these infections very difficult
- There are a number of interventions that are effective in decreasing the rates of HAIs however these are not always being implemented consistently or rigorously
- In the past there has been insufficient emphasis placed on surveillance of HAIs, which is a cornerstone of infection prevention and control. Surveillance is the process of actively monitoring patterns of infection and disease. It provides information needed to determine the extent of any healthcare infection problems that may exist and facilitates timely intervention to address these
- The problem of HAIs is a global one and a challenge to health services worldwide

At a national level the Australian Commission on Safety and Quality in Healthcare (ACSQHC) has developed a number of key infection control initiatives (Cruickshank & Ferguson, 2008). These priority programs include a National HAI Surveillance System, National Infection Control Guidelines, Building Clinician Capacity, Antibiotic Stewardship and a National Hand Hygiene Project. The TIPCU has used the surveillance definitions recommended by the ACSQHC to ensure Tasmania has a reliable approach to data collection, analysis and reporting of HAIs that is consistent with what is happening in other states and territories. Improved healthcare worker hand hygiene (HH) is another priority area that has been identified to reduce the risk of HAIs.

How Can Healthcare Associated Infections Be Minimised?

There is no single cause of, or quick fix to the problem of HAIs. Evidence suggests that the issue needs to be tackled using a multi-faceted approach.

There are however some proven ways of minimising the risks of HAIs. These include:

- Undertaking surveillance to help understand the rates and patterns of infection
- Ensuring good levels of hand hygiene within hospitals
- Ensuring careful and appropriate use of antibiotics (this is called Antibiotic Stewardship)
- Sound infection prevention & control practices including;
    - Identifying patients who are carrying or are 'at risk' of acquiring certain resistant organisms and isolating them from other patients if necessary
    - The effective use of personal protective equipment, such as gloves, gowns and aprons
    - Strong governance and reporting structures within organisations to manage infection risks
- Education of healthcare workers, patients and the public
- High levels of environmental hygiene and cleanliness
- Clinical leadership and organisational support

What Is Surveillance And Why Should We Do It?

In medical terms, surveillance can be defined as "the collection, collation, analysis and dissemination of data." The object of surveillance is to provide accurate and reliable data that can be used to monitor and improve the quality and safety of patient care. The results of surveillance programs provide an objective measurement of the standard of infection control practices within hospitals and other healthcare facilities.

Surveillance programs usually focus on infections that occur most frequently in healthcare settings and on those types of infections that pose the greatest risk to patients. Other infections are monitored because they are important indicators of a range of important healthcare processes such as hand hygiene and environmental cleanliness.

The availability of reliable surveillance data:

- Is associated with a reduction in infection rates and subsequent patient morbidity and mortality
- Underpins all quality improvement processes
- Can be used to demonstrate the effectiveness of interventions
- Enables outcomes to be monitored
- Allows transparency for patients
- Provides useful information for clinicians

The ACSQHC has recommended the establishment of a national surveillance system to monitor HAIs and provide timely feedback to jurisdictions, managers and clinicians (Cruickshank & Ferguson, 2008).

What HAI Indicators Are Used In Tasmania?

The TIPCU undertakes surveillance of key HAIs. The indicators contained in the TIPCU surveillance reports are:

1. ***Staphylococcus aureus* bacteraemia** (bloodstream infection)
2. ***Clostridium difficile* infection**
3. ***Staphylococcus aureus* sensitivity** - the percentage of infections caused by *Staphylococcus aureus* that are due to Methicillin Resistant *Staphylococcus aureus* (MRSA)
4. **Vancomycin Resistant Enterococci** (VRE)
5. **Hand Hygiene Compliance Rates**
6. **Antibiotic Utilisation Surveillance**

Detailed protocols on how the data for these indicators is collected, verified and analysed are available on the TIPCU website.

To undertake this surveillance the TIPCU uses information obtained from microbiology laboratories, patient information systems and hospital infection control staff throughout Tasmania.

Some important things to know about the data:

- All data is validated from another source. For example, data obtained from hospitals about a specific infection is cross referenced against data received directly from the microbiology laboratory
- Wherever possible, nationally agreed definitions are used to determine rates
- The TIPCU works in collaboration with hospitals in collecting and collating the data
- In Tasmania, both *Staphylococcus aureus* bacteraemia and Vancomycin Resistant Enterococci are notifiable pursuant to the Public Health Act 1997

What Do The Rates Mean?

The rates of infections presented in the TIPCU report are often presented as a percentage or a rate per 1000 separations.

When a rate is presented as a number per 1000 separations, this essentially means the rate at which the infection occurs per 1000 admissions to hospital. For example if the rate of healthcare associated *Staphylococcus aureus* bacteraemia was 0.5 per 1000 separations this means that for every 2000 admissions to hospital one patient will acquire a *Staphylococcus aureus* bacteraemia (or for every 1000 admissions, 0.5 people will acquire an infection).

More Detail About Each Of The Indicators In The TIPCU Report

Staphylococcus aureus bacteraemia *(SAB)*

What is SAB?

Staphylococcus aureus bacteraemia occurs when the bacterium *Staphylococcus aureus* enters the bloodstream. *Staphylococcus aureus* bacteraemia is a serious infection, with an estimated mortality rate of around 25 - 35% (Whitby, McLaws et al. 2001; Wyllie, Crook et al. 2006).

Why is this important for patients?

- Bloodstream infections (BSIs) are arguably the most important category of HAI as they cause significant patient morbidity and mortality. *Staphylococcus aureus* is the most common cause of serious healthcare associated BSI (Christiansen, 2008)
- Of approximately 7,000 episodes of SAB that occur in Australia each year, two thirds are healthcare associated. The majority of these cases occur as a result of intravascular catheters and are potentially preventable (Collignon, Nimmo et al. 2005)
- SAB caused by Methicillin Resistant *Staphylococcus aureus* (MRSA) is associated with poorer patient outcomes and is therefore of particular concern

Why is this important to clinicians?

- *Staphylococcus aureus* bacteraemia (SAB) rates are important markers of intravascular catheter ("IV Line") management and the effectiveness of hand hygiene within a hospital or institution (Collignon & Wilkinson, 2006)

What are the key terms associated with SAB surveillance?

- ***Staphylococcus aureus* bacteraemia (SAB):** Refers to the isolation of *Staphylococcus aureus* from a patient's blood i.e. they have a *Staphylococcus aureus* bloodstream infection
- **Healthcare associated (HCA) SAB Rate:** The rate of SAB in patients who acquire this infection as a result of receiving healthcare. This rate equals the healthcare associated inpatient rate PLUS the healthcare associated non inpatient rate

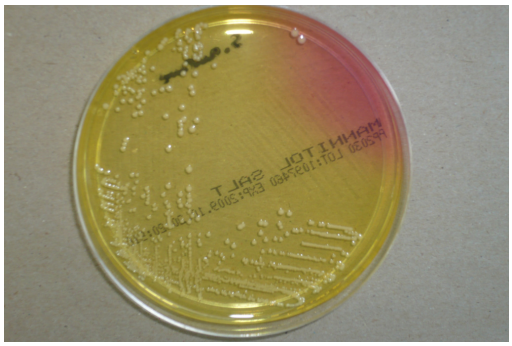
- **Healthcare associated Inpatient (HCA In) SAB Rate**: The rate of SAB in patients who are in hospital for more than 2 days prior to the SAB being detected (or in whom the SAB was detected within 2 days of hospital discharge)
- **Healthcare associated Non Inpatient (HCA Non) SAB Rate:** The rate of SAB in patients who are in hospital less than 2 days before detection of this infection but who were receiving healthcare in an outpatient setting or were recently hospitalised
- **Community associated SAB Rate:** The rate of SAB in patients who acquire this infection in the community without having recently received healthcare

What do the SAB rates in the report mean?

The SAB section is broken into two areas:

1. Tasmanian Rate
    a. Information in this section relates to all public hospitals combined
    b. There are two graphs
        i. One demonstrates the rate of all healthcare associated SAB
        ii. The second demonstrates the rate of community associated SAB

2. Hospital Rates
    a. Information in this section presents data from each of the four acute public hospitals individually
    b. There is one graph which shows the rate of total healthcare associated SAB per quarter for each of the public hospitals. This graph excludes those cases found to be community associated



Staphylococcus aureus (MSSA)

Clostridium difficile infection *(CDI)*

What is CDI?

Clostridium difficile infection (CDI) is an infection of the bowel that is caused by the bacterium *Clostridium difficile*. This organism enters the body as a result of accidental ingestion of the bacteria's spores. The spores are often found in healthcare environments. When a person receives antibiotics, these can sometimes cause a disruption to the normal balance of bacteria in the bowel. This allows ingested *Clostridium difficile* spores to grow, causing diarrhoea and stomach discomfort. Overseas countries have experienced strains of *Clostridium difficile* that are particularly aggressive and affect patients more seriously.

Why is this important for patients?

- CDI is the most common cause of healthcare associated gastrointestinal infection (Sunenshine & McDonald, 2006)
- CDI causes significant patient morbidity and mortality and results in increased hospital stays and costs (Kuijper et al 2006)
- In recent years, new 'hyper-virulent' strains of *Clostridium difficile* have been recognised in the northern hemisphere. These have resulted in numerous hospital based outbreaks of severe CDI (Riley, 2006)

Why is this important to clinicians?

- Factors that may contribute to higher CDI rates include the overuse of antibiotics, ineffective infection control processes and suboptimal levels of environmental cleanliness

What are the key terms associated with CDI surveillance?

- ***Clostridium difficile* infection (CDI):** The detection of toxin producing *Clostridium difficile* from the stools of a patient with diarrhoea

What do the CDI rates in the report mean?

In the report, the CDI section is broken into two areas and is presented on a graph showing the rolling average of infections. The rolling average is a way of demonstrating trends.

1. Tasmanian Rates
    a. Information in this section is the total rate of CDI from all public hospitals combined
2. Hospital Rate
    a. Information in this section describes the total rate of CDI for each of the four acute public hospitals in Tasmania individually per quarter

Vancomycin Resistant Enterococci *(VRE)*

What is VRE?

Enterococci are bacteria often found in the human gastrointestinal tract. They may live harmlessly in the bowel or on the skin but can also cause infections in vulnerable and hospitalised patients. Vancomycin Resistant Enterococci (VRE) are enterococci that have become resistant to the powerful antibiotic Vancomycin and are therefore difficult to treat.

Why is this important for patients?

- Enterococci, including VRE, are able to survive in the hospital environment which may act as a 'reservoir' for bacteria that subsequently cause asymptomatic 'colonisation' and / or infection of patients
- Enterococci that are resistant to the antibiotic Vancomycin (VRE) were first described in the mid 1980s and appear to be increasing in frequency worldwide, including Australia (Cruickshank & Ferguson, 2008)
- The outcomes for patients infected with VRE are worse than those of patients infected with Vancomycin sensitive enterococci. VRE infection also results in increased lengths of hospital stay and as a result, increased institutional costs (DiazGrandos et al, 2005)

Why is this important to clinicians?

- The reasons for the recently reported increasing rates of VRE in Australia and globally are not fully understood but factors thought to be important include the overuse of antibiotics, ineffective infection control procedures and suboptimal levels of cleanliness

What are the key terms associated with VRE surveillance?

- **Vancomycin Resistant Enterococci (VRE)** - Enterococci that are resistant to the powerful antibiotic Vancomycin.
- **VRE Colonisation:** The detection of VRE from a non-sterile site in a patient who is thought not to be suffering from an active VRE infection and who is not receiving specific antibiotic therapy
- **VRE Infection:** The detection of VRE from a sterile site OR in a patient who is thought to be suffering from an active VRE infection where antibiotic therapy targeted to the specific organism is prescribed
- **Healthcare associated VRE:** The organism has been identified more than 48 hours after the patient's admission OR its isolation is believed to be

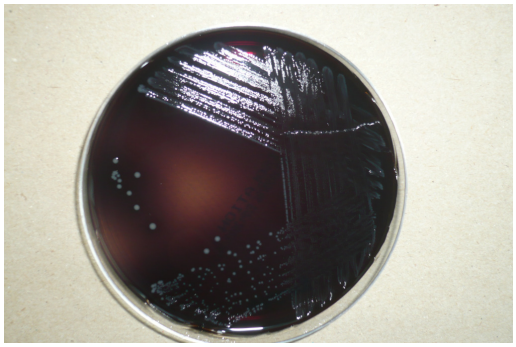
linked to a previous admission and / or hospital attendance i.e. within one month of discharge

- **ICU acquired VRE:** The organism has been identified more than 48 after ICU admission OR within 48 hours of ICU discharge
- **Non healthcare associated VRE:** The organism has been identified less than 48 hours after admission AND its isolation is believed to be NOT linked to a previous admission and / or hospital attendance within the past one month

What does the VRE data in the report mean?

In the report, the VRE section is broken into two areas:

1. Tasmania Numbers
    a. The table in this section shows the total numbers of people identified with VRE by quarter
2. Hospital Numbers
    a. The table in this section shows the total number of people identified with VRE per quarter by individual hospital. It is also broken down into colonisation and infection



Vancomycin resistant Enterococci (VRE)

Staphylococcus aureus Sensitivity

What is *Staphylococcus aureus* Sensitivity?

The proportion of patients hospitalised for more than 48 hours in whom a *Staphylococcus aureus* infection is caused by Methicillin Resistant *Staphylococcus aureus* (MRSA) as opposed to Methicillin Sensitive *Staphylococcus Aureus* (MSSA). In other words this surveillance provides an answer to the question: "If you were a patient in hospital (for more than 48 hours) and you develop a *Staphylococcus aureus* infection, what is the chance that the isolate will be MRSA?"

Why is this important for patients?

- *Staphylococcus aureus* is the single most common bacterial cause of HAIs
- Infections caused by *Staphylococcus aureus*, particularly MRSA, result in adverse patient outcomes and increased healthcare costs
- There is evidence that MRSA control is cost effective, even in endemic settings (Peterson et al 2007)

Why is this important for clinicians?

- Infection control strategies that minimise the transmission of MRSA within the healthcare setting improve patient outcomes and are cost effective (Vriens et al, 2002)

What are the key terms associated with *Staphylococcus aureus* Sensitivity surveillance?

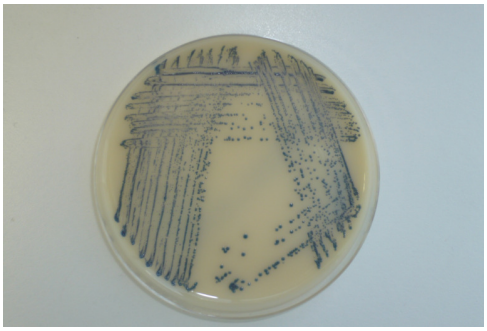
- **Methicillin Sensitive *Staphylococcus aureus* (MSSA):** *Staphylococcus aureus* which is sensitive to the antibiotic methicillin / flucloxacillin
- **Methicillin Resistant *Staphylococcus aureus* (MRSA):** *Staphylococcus aureus* which is resistant to the antibiotic methicillin / flucloxacillin
- **Clinical Samples:** Only specimens obtained from patients with clinical illness, as opposed to specimens collected for screening purposes, are included
- **Isolate**: *Staphylococcus aureus* detected in a clinical sample. Only one isolate per patient, namely the first sample from the most clinically significant site, is included. If both MSSA and MRSA are isolated, only the MRSA is included in the analysis

What does the data below mean?

In the report, the *Staphylococcus aureus* sensitivity section is broken into two sections.

1. Tasmanian Rate
   a) Table 3 compares the numbers of *Staphylococcus aureus* isolates (clinical samples) that were MRSA in patients that were in hospital more than 48 hours (suggesting that the isolate may have been hospital acquired)
   b) Table 4 compare the number of *Staphylococcus aureus* isolates that were MRSA in patients in hospital for less than 48 hours

2. Hospital Rates
   a) Table 5 lists the numbers of *Staphylococcus aureus* isolates (clinical samples) that were MRSA by individual hospitals and compares this by year.



Methicillin Resistant *Staphylococcus aureus* (MRSA)

Hand Hygiene

What is Hand Hygiene?

Hand hygiene is the act of cleaning the hands. This can be performed by using:

- Soap and water (recommended when hands are visibly dirty, soiled with blood and / or other body fluids or after using the toilet)
- Alcohol-based hand rubs (if hands are not visibly soiled)

Why is this important for patients?

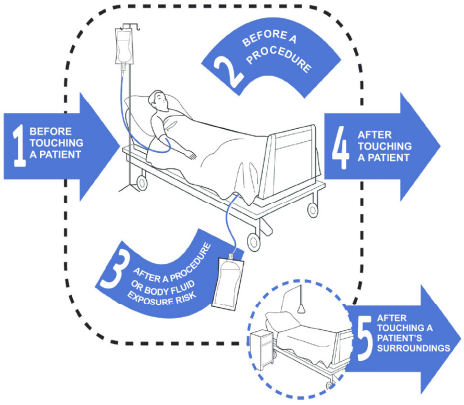
Hands are the main pathways of transmission of germs during healthcare. Hand hygiene is **the most important** way to avoid the transmission of harmful germs and prevent HAIs.

Why is this important for clinicians?

Poor hand hygiene practice among healthcare workers is strongly associated with higher rates of HAIs and is a major factor in the spread of antibiotic-resistant pathogens within hospitals.

What are the key terms associated with hand hygiene?

- **Hand Hygiene Compliance:** Is a measure of the percentage of times that a healthcare worker correctly performs hand hygiene.
- **"5 Moments":** These are the 5 times (or moments) that healthcare workers must perform hand hygiene.
    - Moment 1: Before touching a patient
    - Moment 2: Before a procedure
    - Moment 3: After a procedure or body fluid exposure risk
    - Moment 4: After touching a patient
    - Moment 5: After touching a patient's surroundings



What do the rates below mean?

The hand hygiene compliance rate is the percentage of times that a healthcare worker correctly performs hand hygiene. Only auditors who have undertaken specific training can audit or measure hand hygiene compliance. The same method of training is occurring in all states in Australia. Research from a number of hospitals has shown that hand hygiene rates above 60% significantly reduce the numbers of serious HAIs (Grayson et al 2008).

In the report, hand hygiene rates are presented as:

1. Tasmanian Rates
    a. Graphs in this section refer to the combined rates for all participating hospitals in Tasmania. The graphs compare
        - The total Tasmanian rate each time an audit is undertaken
        - Tasmanian rates against other states
        - The rates of hand hygiene for different groups of Tasmanian healthcare workers
        - The rates for each "moment" or hand hygiene opportunity

2. Hospital Rates
    a. The graph in this section demonstrates the rate of hand hygiene compliance in each participating Tasmanian hospital, according to the last audit undertaken

Antibiotic Utilisation Surveillance

What is antibiotic utilisation surveillance?

Antibiotic utilisation surveillance is a way of measuring the amount of antibiotics prescribed in acute hospitals. The overuse and / or inappropriate use of antibiotics is associated with the subsequent development of antibiotic resistant bacteria which are often difficult to treat. Surveillance of antibiotic use within a hospital allows antibiotic prescribing patterns to be compared with those reported in other hospitals, both nationally and internationally, and is of value to clinicians, pharmacists and hospital administrators.

Common Questions & Answers

Q – How can I tell if the rates of healthcare associated infections are increasing?

A – Each report contains an Executive Summary which will dot point the key findings of the report, including any significant increases or decreases. It is important to look at all the different measurements in the report, not one in isolation. You can look at the quarterly rates in the report to see whether a rate is increasing or decreasing.

Q – Are HAIs really preventable?

A – Yes. There is now a wealth of evidence to suggest that a large proportion, although probably not all, HAIs are preventable. For example, in some countries, the rate of SAB has halved after improving infection control measures and introducing new initiatives. Another example is that of bloodstream infections occurring in Intensive Care Units, where some studies and surveillance programs have shown that intervention programs can result in a fall in infection rates to near zero.

Q – Why are you publishing rates of infections and other indicators relating to HAIs such as hand hygiene?

A - Many countries and some states in Australia have been publishing rates of HAIs for a number of years. Publishing rates of HAIs means that patients and the public can understand what is happening in their hospitals and clinicians can use the data to evaluate the impact of new initiatives to reduce HAIs.

Q – Why are hand hygiene compliance rates not 100%?

A – In Australia we are at the beginning of the first nationally coordinated hand hygiene campaign and as such, it is the first time we have 'taught' and 'measured' hand hygiene in the same way across the country. One reason for low rates of hand hygiene compliance has been the lack of availability or access to hand hygiene products. As part of the national hand hygiene initiatives, issues such as these are being addressed. Another factor is that the tool used to measure compliance is very strict and makes it very difficult to obtain high hand hygiene compliance rates. Research has shown that maintaining hand hygiene compliance rates above 60% will have the biggest impact on decreasing the rates of HAIs. As the rate increases above 70% the additional benefit gained in reducing HAI rates is less dramatic. This is why other important infection control measures, for example the correct use of personal protective equipment, appropriate antibiotic use and hospital cleanliness are also important.

Q – What can I do to prevent myself getting a HAI?

A – It is important that you and your visitors perform hand hygiene regularly and listen to instructions or advice provided by your healthcare worker. You can also ask your healthcare worker if they have performed hand hygiene before treating you and discuss infection risks with your healthcare worker before undergoing any procedure.

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Glossary

"5 Moments": These are the 5 times (or moments) that healthcare workers must perform hand hygiene.

- Moment 1: Before touching a patient
- Moment 2: Before a procedure
- Moment 3: After a procedure or body fluid exposure risk
- Moment 4: After touching a patient
- Moment 5: After touching a patient's surroundings

ACSQHC - Australian Commission on Safety and Quality in Healthcare

Antibiotic – a chemical substance that can kill or inhibit the growth of bacteria, fungi or parasites

Antibiotic stewardship - an ongoing effort by a healthcare institution to optimise antimicrobial use among hospital patients in order to improve patient outcomes, ensure cost-effective therapy and reduce adverse outcomes of antimicrobial use, including antimicrobial resistance

Antibiotic utilisation surveillance - a way of measuring the amount of antibiotics prescribed in acute hospitals.

Bacteraemia (blood stream infection) - The presence of live bacteria in the bloodstream

Blood Letters – phlebotomy staff or staff who take blood from patients

Clinical Samples: Only specimens obtained from patients with clinical illness, as opposed to specimens collected for screening purposes

***Clostridium difficile* infection (CDI):** The detection of toxin producing *Clostridium difficile* from the stools of a patient with diarrhoea

Colonisation – the process in which microorganisms [eg. bacteria] live and reproduce on the human body without causing disease

Community associated SAB Rate: The rate of SAB in patients who acquire this infection in the community without having recently received healthcare

Hand Hygiene (HH) - A process that reduces the number of micro-organisms on hands. Hand hygiene is a general term applying to the use of soap/solution (non-antimicrobial or antimicrobial) and water or a waterless antimicrobial agent to the surface of the hands e.g. alcohol-based hand rub

Hand Hygiene Compliance: Is a measure of the percentage of times that a healthcare worker correctly performs hand hygiene

Healthcare associated infection (HAI) - Infections that originate from, or are related to, a healthcare setting or the delivery of healthcare

Healthcare associated (HCA) SAB Rate: The rate of SAB in patients who acquire this infection as a result of receiving healthcare. This rate equals the healthcare associated inpatient rate PLUS the healthcare associated non inpatient rate

Healthcare associated Inpatient (HCA In) SAB Rate: The rate of SAB in patients who are in hospital for more than 2 days prior to the SAB being detected (or in whom the SAB was detected within 2 days of hospital discharge)

Healthcare associated Non Inpatient (HCA Non) SAB Rate: The rate of SAB in patients who are in hospital less than 2 days before detection of this infection but who were receiving healthcare in an outpatient setting or were recently hospitalised

Healthcare associated VRE: The organism has been identified more than 48 hours after the patient's admission OR its isolation is believed to be linked to a previous admission and / or hospital attendance i.e. within one month of discharge

Hospital acquired infection– an infection acquired in hospital. This terminology is being replaced by the term healthcare associated infection (HAI)

Hyper-virulent strain - a pathogen with an increased ability to cause disease and harm to people who become infected

ICU acquired VRE: The organism has been identified more than 48 after ICU admission OR within 48 hours of ICU discharge

Infection – the growth of disease-causing microorganisms in the body

Methicillin Resistant *Staphylococcus aureus* (MRSA): *Staphylococcus aureus* which is resistant to the antibiotic methicillin / flucloxacillin

Methicillin Sensitive *Staphylococcus aureus* (MSSA): *Staphylococcus aureus* which is sensitive to the antibiotic methicillin / flucloxacillin

Non healthcare associated VRE: The organism has been identified less than 48 hours after admission AND its isolation is believed to be NOT linked to a previous admission and / or hospital attendance within the past one month

Occupied bed days (OBDs) – total number of bed days of all admitted patients accommodated during the reporting period

Resistant Organism - microorganisms with genes that bestow antimicrobial resistance on bacteria

Separations - A separation is a completed episode of care, for example a patient is admitted due to a broken arm, is treated and discharged - this is equivalent to one episode of care

***Staphylococcus aureus* bacteraemia (SAB):** Refers to the isolation of *Staphylococcus aureus* from a patient's blood i.e. they have a *Staphylococcus aureus* bloodstream infection

Tasmanian Infection Prevention and Control Unit (TIPCU) - The TIPCU commenced in 2008. The unit is based within Population Health, DHHS and coordinates activities across DHHS clinical care providers as well as having links with the private health care sector. TIPCU's responsibility lies within the area of infections that are acquired by patients as a result of contact with health care services, namely healthcare associated infections (HAIs)

Vancomycin Resistant Enterococci (VRE) - Enterococci that are resistant to the powerful antibiotic Vancomycin.

VRE Colonisation: The detection of VRE from a non-sterile site in a patient who is thought not to be suffering from an active VRE infection and who is not receiving specific antibiotic therapy

VRE Infection: The detection of VRE from a sterile site OR in a patient who is thought to be suffering from an active VRE infection where antibiotic therapy targeted to the specific organism is prescribed

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