# IN PATIENT AND DAY HOSPITALS

## Message from Our Team

Welcome to the Winter 2025 edition of our newsletter. Levels of influenza, COVID-19 and RSV have all increased to, or above, seasonal thresholds. We strongly encourage you to promote COVID-19 and influenza vaccination to all your patients and staff to help protect against severe disease from these pathogens. The latest ATAGI Clinical Advice for COVID-19 vaccination is below, along with an interesting article looking at the potential benefits of the Shingles vaccine in reducing the risk of dementia.

This is a bumper issue with lots of articles covering a wide range of relevant topics. Keeping with the theme of acute respiratory infections (ARI), indoor air quality has become increasingly recognized as a factor for the risk of ARI transmission and an article discusses the data, the gaps and offers some practical solutions to improve indoor air quality where it is not optimal.

Australia is transitioning to new respiratory protection standards over the next few years and an information webinar was presented on 2 May 2025, the recording is now available online. The Australasian College of Infection Prevention and Control (ACIPC) has released two position statements relating to terminology for ARI transmission and use of Particulate Filter Respirators (PFR) when dealing with COVID-19 positive consumers.

Environmental cleaning is discussed in a range of articles from differences defining chemical disinfection, take home messages from a study looking at who cleans better (internal or external cleaners), and in depth studies of the risks posed from sinks and drains. The Australian Health Facility Guidelines has released a content update for Standard Components for Operating Suites, very relevant for any facility planning upgrades or refurbishments to the OR.

In the clinical focus, appropriate and safe use of chlorhexidine is in the spotlight, along with improving perioperative bathing compliance, and the preils of continuous wearing of false eyelashes in the clinical settings. The Australian Commission on Safety and Quality in Healthcare has released a fact sheet for cleaning and disinfection of ultrasound transducers, and unseen threats of cleaning lumened surgical and disinfections if discussed. In April 2025 and interim guidance paper on alternative antisepsis products for minor procedures was released by ACIPC, ASID and AVAS.

As usual, links are provided with each item throughout the newsletter for easy access to the full articles.

Until next time, look after yourselves and stay well.

# IMMUNISATION UPDATE

## COVID-19 Vaccination – ATAGI Statement – Clinical Advice 27 March 2025

**Key points for 2025**

- Vaccination remains an important measure to protect those at risk of severe disease from COVID-19.
- All adults are eligible for a COVID-19 vaccine every 12 months.
- Adults aged 75 years and over, including aged care residents, have the highest risk of severe COVID-19 including death, and are recommended to receive COVID-19 vaccines every 6 months.
- The current COVID-19 vaccines available for use are Comirnaty JN.1 and Omicron XBB.1.5-containing vaccines.
- COVID-19 vaccines can be co-administered with any other vaccine for people aged ≥5 years.

**Shingles vaccine linked to dementia risk reduction**

Herpes zoster, commonly known as shingles, is a reactivation of the varicella-zoster virus (VZV) in a person who has previously had varicella (chickenpox). Herpes zoster commonly presents as a painful, self-limiting vesicular rash in a dermatomal distribution.


The risk and severity of herpes zoster and its complications increases with age. The lifetime risk of herpes zoster for people who live to 80 years of age is around 50%. The risk is higher in those who are immunocompromised.

In Australia, the shingles vaccine Shingrix (inactivated) is available under the National Immunisation Program (NIP) for:

- people aged 65 and over
- aboriginal and Torres Strait Islander people aged 50 and over
- people aged 18 or over considered at increased risk of shingles due to certain treatments or underlying conditions.

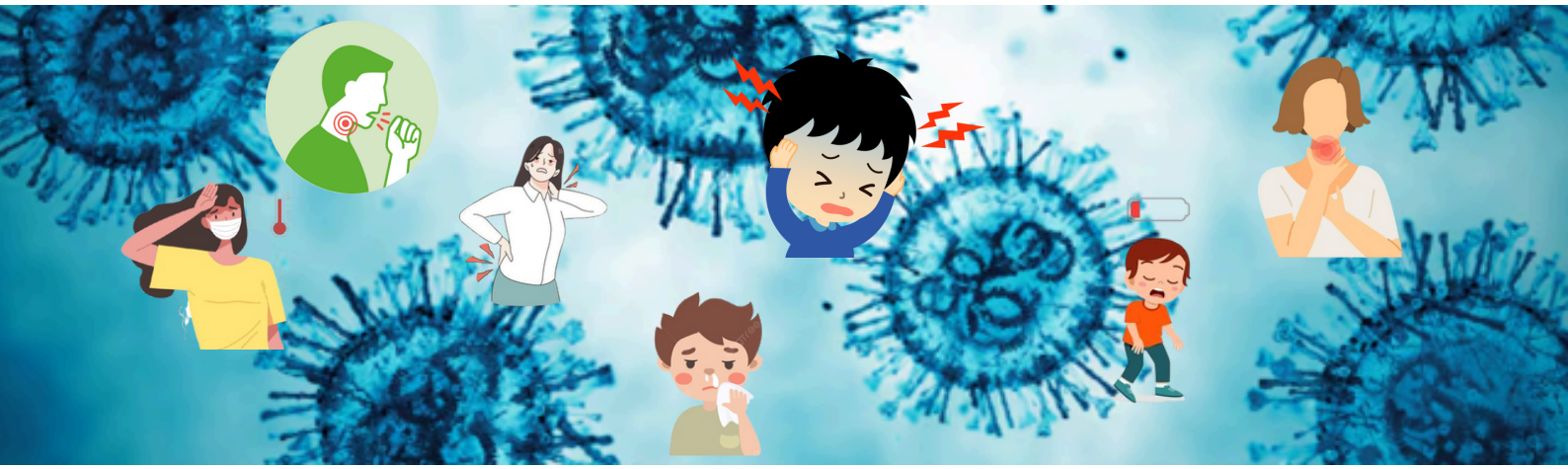
New research out of Wales has found that shingles vaccines may have a role to play in reducing the risk of dementia, which is the second-leading cause of death in Australia.

A study of more than 280 000 people found the Zostavax (live-attenuated) shingles vaccine can reduce the risk of dementia by 20% over a seven year period, with the protective effect being stronger in women than men.

Researchers say that moving forward, future studies will determine if Shingrix has the same benefit and whether immunisation at a younger age is justified.

Shingrix consists of 2 doses of 0.5 mL given 2–6 months apart in immunocompetent people or 1–2 months apart in people who are immunocompromised or shortly expected to be immunocompromised. Are your patients and eligible healthcare workers up to date with their shingles vaccines?

For the full article, click here



# Spotlight Organism

## Human Metapneumovirus (hMPV)

### What?

Human Metapneumovirus (hMPV) is a common winter respiratory tract virus that causes a mild infection like a common cold or respiratory syncytial virus (RSV) infection. It usually makes people only

mildly sick, but it can make some people very sick, particularly the elderly and immunocompromised individuals.

## Background on hMPV

Discovered in 2001, hMPV is a single-stranded RNA virus and a quite recent addition to the Paramyxoviridae family. Its cases have been documented all over since their discovery in the Netherlands. Often compared with RSV, identified decades before in 1956, hMPV is structurally similar and taxonomic close within the same family. Usually referred to as influenza-like illness (ILI), these viruses cause comparable clinical symptoms ranging from mild to moderate upper respiratory infections to severe lower respiratory tract infections (LRTIs) resulting in medical intervention and hospitalisation. While it is not a novel respiratory virus and is quite prevalent in children under the age of 5 in causing bronchiolitis, it has been trending in the news due to an unprecedented surge in hMPV infections that began in China in late 2024. Notable is the health care and financial load hMPV causes in paediatric respiratory disease; this is only second to RSV, another Paramyxoviridae family member.

## Symptoms

- Cough
- Fever
- Sore throat
- Body ache
- Runny or blocked nose
- Headache and tiredness.

## Complications

It can cause infection of the lung (pneumonia) or inflammation of the airways to the lungs (bronchiolitis, bronchitis). More severe symptoms include wheezing, difficulty breathing, chest pain, dizziness, severe fatigue, dehydration, or a persistent fever that does not improve. If someone is experiencing any of these severe symptoms, they should seek medical advice immediately.

## At Risk?

- It is a common cause of upper respiratory infections among infants and children under 5 years old.
- While anyone can catch hMPV, infants, older adults, and those with health conditions like immunosuppression, chronic obstructive pulmonary disease (COPD) and asthma are at higher risk for severe illness.

## How it spreads?

HMPV spreads by droplets in the air that contain the virus or direct contact with mucus or saliva. People get infected by:

- breathing in droplets when an infected person breathes, coughs or sneezes on them

- touching a surface contaminated with droplets - for example, hands, tissues, toys or eating utensils - and then touching their eyes, nose or mouth.

## Detection of hMPV

A polymerase chain reaction (PCR) test is the most reliable way to diagnose hMPV, giving accurate results within a few hours.

## Prevention and Treatment

Preventing hMPV infection is similar to preventing other respiratory illnesses with actions such as:

- wearing a mask
- improving ventilation where possible
- cleaning hands regularly and thoroughly, with either soap and water or an alcohol-based hand rub
- avoiding touching eyes, nose or mouth without cleaning hands first.
- eating a balanced diet.

# INTERESTING ITEMS

## Indoor Air Quality in Healthcare: The Data, the Gaps, and Practical Solutions.

Since the COVID-19 pandemic started, there has been an increasing focus on indoor air quality. Healthcare indoor air quality (IAQ) is a critical, yet often overlooked component of IPC and patient safety. Recent studies have revealed that in many healthcare environments, IAQ falls short of international standards. This significantly increases the risk of healthcare associated infections (HAI) and negatively affects patients and healthcare staff alike.

Research shows that:

- elevated temperatures triples the risk of air contamination;
- excessive dust increases the risk 6-fold;
- high bacterial load increases the risk 5-fold;
- overcrowded rooms increases risk by 4.7 times; and
- poor sanitation more than triples contamination risk.

Interestingly, humidity, staff behaviours and adherence to protocols were not statistically significant. As a result of this, 5-10% of hospitalised patients will develop a HAI. The discrepancy between recommended IAQ and healthcare reality carries real consequences.

Technology exists to mitigate the risk but implementation lags. High Efficiency Particulate Air (HEPA) filters, bipolar air ionization, UV-C radiation, passive removal material, and advanced HVAC systems can all help in different ways. Ongoing monitoring of colony forming units (CFU)/m3, carbon dioxide ($CO_2$ ) levels, air particulate matter with a diameter of 2.5 micron or less (PM 2.5) and volatile organic compounds (VOCs) is essential for real time risk assessment, improved consumer outcomes and occupational safety.

Read the full article here.

## Infection prevention and control professionals: Stress, resilience, personality traits and views about their workforce and profession

The COVID-19 pandemic placed considerable strain on the IPC workforce. This study aimed to understand the IPC workforce by determining stress and resilience levels, personality traits and workforce intentions, in order to support the IPC workforce and inform future initiatives.

Using an online survey, 356 IPC professionals across Australia and New Zealand were surveyed. The findings were that:

- Younger IPC workers and those with less IPC experience had higher levels of stress and lower levels of resilience.
- Individual personality traits vary by age, level of education and credentialling status.
- Approximately 1 in 5 participants planned to leave the IPC workforce in the next 3 years.

The findings highlighted the need for mentoring, peer support and wellbeing initiatives to support the profession.

Read the full article here

## Who Cleans Better in Hospitals – Internal or Outsourced Staff? And What Truly Impacts Cleaning Quality?

The question of who performs cleaning in hospitals (internal cleaners or external contractors) is often debated. This article looks at three studies addressing this question, one from Chile (2014), one from Uganda (2018) and one from India (2022). Additionally, a comparative article in 2023 highlighted that the key to successful cleaning does not lie in whether internal or external personnel performed the cleaning, but rather in the level of supervision, clarity of responsibilities, and alignment with organisational needs. A study from Argentina (2019) backs up these findings.

The overall conclusion from all these studies is that it is not the identity of the cleaning team (internal or external) that matters most, but the quality of training, supervision and oversight. When there is a dedicated, independent, and professional figure overseeing the cleaning process, the result is cleaner surfaces and fewer infections.

Read the full article here

## Chemical Disinfection in Healthcare Settings: Critical Aspects for the Development of Global Strategies

Chemical disinfection is an indispensable means of preventing infection. Research on how to ensure effectiveness of disinfectants and the process of disinfection, as well as on when, how and where to implement disinfection precautions is an ongoing challenge. In view of the global threat of communicable diseases and emerging and reemerging pathogens and drug resistant pathogens, the relevance of chemical disinfection is continually increasing. However, much less attention has been paid to the requirements for the development, marketing and practical application of chemical disinfectant procedures and the consequences for public health from a global perspective.

A 2-day symposium bringing together an international multidisciplinary team of experts discussed these issues. Some of the factors identifies were:

- The terms disinfection and disinfectant are not clearly defined and are similar but not the same in different countries;
- Major differences exist as to the exclusion or inclusion of sporicidal activity, hand and skin antisepsis, and as to the mode of action described: elimination, removal, killing, inactivation;
- In some countries, a differentiation is made between the terms ‘skin disinfection’ referring to intact skin, and ‘skin antisepsis’ referring to damaged skin;
- Legal regulations differ considerably and range from some countries not having a regulatory body for the approval of disinfectants in healthcare facilities, to a very complicated structure for registration and efficacy testing of disinfectants and antiseptics for various applications; and
- Microbicide formulations may be classified as medicinal products, medical devices, biocidal products or antimicrobial pesticides, or may have dual classifications.

The expert panel reached consensus on the following key requirements:

- Reliable quality of disinfectants must be ensured
- International agreement on major criteria for the classification of disinfectants and antiseptics, and their respective regulations should be reached
- International agreement on major criteria for efficacy testing is required
- On-site manufacturing/preparation of disinfectants should be performed with standardized processes

Standardized efficacy testing should be required prior to sales.

**The article further discussed common disinfectants for skin, instruments and surfaces used in healthcare. Disinfection practices in human healthcare settings were discussed including key consensus among the panel of experts for:**

- Hand hygiene and hand antisepsis: Wipes for hand antisepsis are not promoted unless a suitable test protocol has been developed.
- Surgical site skin antisepsis: the application technique should be described in detail.
- Environmental disinfection:
    - Global practices differ widely and minimum international standards are needed;

    - Training, education and compliance of staff members performing and monitoring cleaning and disinfection practices is required;
    - Overall guidelines provide a framework, they do not replace the risk assessment and decisions by IPC experts depending on the local situation, including personnel, organizational and structural prerequisites;
    - Wipes must be tested with a suitable test protocol, material compatibility of wipe and chemical agent must be included;
    - Outbreak management measures of disinfection must be clearly defined;
    - Management and supervision of patient room cleaning and disinfection must be defined;
    - Monitoring and auditing of correct disinfection practices for all types of healthcare setting by PHU must be mandatory;
    - Cleaning and disinfection in healthcare settings must be acknowledged and promoted as a profession that requires highly skilled personnel, who must be paid accordingly;
    - Enough time must be ensured for cleaning and disinfection; and
    - Trainers, supervisors and all personnel must be trained according to a curriculum designed by cleaning and teaching professionals and in cooperation with IPC experts.
- The Australian CLEEN study conducted in 11 hospitals from 6 states confirmed that an evidence based bundle of cleaning and disinfection measures is a cost-effective intervention for reducing HAIs.
- Alternative methods of disinfection to liquid chemical procedures are discussed but they require further consideration.

**The expert panel calls for overall international agreement on the critical aspects for drawing up a strategy for disinfection and antisepsis in healthcare. As with antibiotics, the use of disinfectants and antiseptics cannot be viewed as an isolated practice in only one sector.**

Read Full Article Here

## Exploring Challenges and Policy Considerations in Point-Of-Care Testing for Hospital Preparedness Ahead of Infectious Disease Emergencies: A Qualitative Study

The COVID-19 pandemic showcased the potential of Point-Of-Care Testing (POCT) in healthcare settings. With the creation of more advanced POCT devices that can measure a broader range of analytes, the discovery of biomarkers, the design of microfluidic devices, and improvement in sensitivity and selectivity, more clinical testing is able to be done outside of traditional central laboratories. Even though the technologies that make POCT useful have improved, they are used less than would be expected in clinical settings. This USA study aimed to explore systematic barriers surrounding POCT implementation in healthcare systems.

The challenges/barriers identified included:

- Quality control and assurance issues:
    - Including difficulty complying with manufacturer's specifications and storage requirements, staff training and competency validation, and regulatory compliance with laboratory accreditation and regulatory standards.
- Inconsistent federal and state regulatory pathways:

    - States may approve POCT devices before national approval is given.
    - States may have different policies regarding POCT use.
- Innovation outpacing current regulatory frameworks:
    - Technology is advancing faster than regulatory science, so it is hard for regulatory agencies to keep up with recent innovations. However, this challenge applies to general diagnostics, vaccines, and medications also.
- Staffing and operational issues:
    - Training staff in POCT use.
    - Accessing adequate staff in areas already understaffed.
- Cost considerations:

POCT is more expensive than batch testing in the central laboratory. At the same time, it may be cost-effective to use rapid POCT diagnostics to meet testing demands during a pandemic. Cost is also dependent upon who bears the burden of implementing a new POCT device in the healthcare facility and maintaining market value for test developers when there is low demand.

Read the full article here

## The Perils of Continuous Wearing of False Eyelashes in Clinical Settings

Healthcare professionals, performing or participating in the operative process, are aware that it is essential to adhere to aseptic practices in intraoperative settings. Wearing false eyelashes while participating in clinical and surgical services may be a gateway for possible infection.

The wearing of false eyelashes during open surgical or dental procedures carries infection risks for both the patient and healthcare worker (HCW).

For the HCW:

- Aerosols generated during dental and some surgical procedures can remain suspended in the air for prolonged periods of time and potentially promote microbial growth along the surface of the eyelashes.
- Formaldehyde, a toxic irritant of which bacteria is attracted to, was found in eyelash extension glue.
- Lack of thorough eyelash washing when false eyelashes are worn may result in bacterial or fungal infections.
- False eyelashes may be a breeding area for visuses and parasites.
- Increased risk of eyelid infestation with Demodex (a genus of mites known to reside in human hair follicles).

For the Patient:

All these factors lead to an increased risk of potential contamination of the sterile surgical field, and therefore an increased risk of healthcare associated infections. More studies need to be done to quantify the level of risk, and determine what other preventative measures can be taken to mitigate that risk.

Read the full article here

# IN FOCUS

## ACSQHC Fact Sheet 2025: Cleaning and Disinfection of Ultrasound Transducers

Ultrasound-guided percutaneous procedures involve introducing a needle through skin within the field of view of an ultrasound transducer applied to the surrounding skin. Ultrasound transducers used in these procedures are considered reusable medical devices. Reusable medical devices must be appropriately reprocessed prior to next patient use in accordance with the requirements of AS5369:2023.

Ultrasound transducers used in percutaneous procedures are classified as non-invasive medical devices as the transducer does not penetrate inside the body, either through a body orifice or through the surface of the body. Ultrasound transducers that penetrate inside the body through areas of non-intact skin (e.g. burns sites, open wounds, skin ulcers) or contact areas with mucous membranes (e.g. rectum, vagina), are classified as invasive medical devices.

Steps to be taken:

- Cleaning the transducer immediately after the procedure and generally at point-of-use.
- Disinfecting the transducer
  - Non-invasive transducers are considered non-critical medical devices and must undergo as a minimum, low-level disinfection between procedures.
  - Invasive transducers are classified as semi-critical devices and require a minimum of high-level disinfection before patient use.
  - In addition to cleaning and disinfection the following must always be employed with any ultrasound-guided percutaneous procedure:
    - Hand hygiene before and after procedure
    - Use of Aseptic Technique
    - Prior to use, confirm the transducer has undergone the appropriate level of disinfection
    - Visual inspection of the transducer for contamination and damage.

Read the full fact sheet here

## Unseen threats: Lumens 2.0 Study Reveals the Hidden Challenges of Cleaning Lumened Surgical Instruments

Surgical site infections can cause significant morbidity requiring lengthy antimicrobial treatment. Infections have been linked to surgical instruments with retained tissue and foreign debris, as the presence of blood or soil interferes with sterilization effectiveness. This study aimed to determine the prevalence of visible soil or debris inside instruments and evaluate the impact of recleaning efforts.

Several studies have identified that sterilization systems do not reliable eliminate microbes when retained soil and debris, are present on surgical instruments that have been reprocessed. This study was conducted in the sterile processing department of a large academic medical centre and aimed to inspect a diverse sample of instruments to expand the validity and generalizability of previously reported findings. Following manual cleaning, automated cleaning and steam sterilization, instruments with lumens or dead ends were inspected using borescopes. Any instrument with visible soil or debris was recleaned and reinspected in accordance with a documented protocol.

Results: A total of 117 inspections were performed, 40 initial inspections and 77 follow-up inspections.

- Multiple defects were observed inside lumens of 100% instruments:
  - Scratches inside 95% (38/40);
  - Eroded O-rings from reciprocating saws in the electrical connectors;
- Discoloured surfaces 100%;
  - Brown, rust-coloured or orange 95% (38/40);
  - Black discolouration 60% (24/40);
  - White residue ? “water spots” or detergent residue 33% (13/40);
- Visible debris was evident in 100%
  - Brown, yellow, orange or white chinks 88% (35/40);
  - Black chunks 38% (15/40)
  - Fibrous debris that appeared to be lint or brush bristle fragments 73% (29/40).
- Recleaning was never completely effective and 100% of instruments still had discolouration or debris after multiple rounds of recleaning.

Despite the lack of scientific inquiry about the use of dirty instruments, there is substantial evidence that inadequate processing impacts patient safety and the provision of essential services. Given these findings, infection preventionists and sterile processing leaders should advocate for collaborative efforts with manufacturers to address the challenges faced when reprocessing lumened or dead end instruments. Best practice reprocessing includes routine use of borescopes to assess cleaning effectiveness for surgical instruments with lumens, along with training programs and visual references to ensure staff can interpret inspection results.

Read the full article here

## Instructions For Use (IFUs)

In sterile processing IFUs are like road maps and guide us through the reprocessing journey. But just like a map, they can lead us to different outcomes. Ideally, they take us straight to our destination, sometimes they take us to an intersection, and sometimes to a dead end.

Many in the industry are working collaboratively to improve IFUs, pushing for more accuracy and specificity. IFUs are needed that provide detailed guidance tailored to reprocessing whilst also considering "human factors". Until these are developed, collaboration is the key. Don't work in a silo: rely on your team, document your decisions, and ensure your conclusions are sound.

- ***Do it like someone's life depends on it – because it does***
- ***Do it with the possibility you will have to explain your decision making in a court of law – because you may***
- ***Do it because it's the right thing to do.***

**(Dave Jagrosse, Sterile Processing SME & Consultant).**

Read the full article here

## National Antimicrobial Prescribing Survey (NAPS)

NAPS recently held the National Antimicrobial Prescribing Survey (NAPS) Support Webinar on 2nd April 2025, Navigating the Aged Care NAPS Audit Year: Preparation, Tips and Results Communication. The session recording is now available on the NAPS Resources page, along with recordings of previous webinars.

## Preparing for Australia's new respiratory protection standards

Australia has adopted and will transition to a suite of 30 international standards for respiratory protective equipment, replacing the long-standing AS/NZS 1715:2009, Selection, use and maintenance of respiratory protective equipment and AS/NZS 1716:2012, Respiratory protective devices. These changes are designed to better align with international best practice and focus on user performance needs. The rescheduled Preparing for Australia's new respiratory protection standards online event was held on Friday 2 May 2025.

The recording is now available here.

## ACIPC Position Statement: PFR Masks in COVID-19 Management

Following on from the above article, ACIPC has released a Position Statement calling for the consistent use of particulate filter respirators (PFRs) – not surgical masks – in healthcare environments where COVID-19 is suspected or confirmed. This challenges the current Australian IPC guidelines, which recommends surgical masks as the standard PPE. Evidence confirms that COVID-19 is transmitted through both droplet and airborne particles, especially in enclosed spaces and during aerosol generating procedures. Healthcare workers and consumers face significant risk without appropriate respiratory protection.

Read the full position statement here

## ACIPC Position Statement: Terminology on Pathogens That Transmit Through the Air

In line with this change, ACIPC has released a position statement on Terminology on Pathogens That Transmit Through the Air.

Inconsistencies in key terms has resulted in confusion of the use and understanding of transmission pathways. Standardising terminology as knowledge evolves is important for effective communication across all aspects of health.

**ACIPC recommends:**

Terminology for pathogens that transmit through the air is standardised including;

- Introduction of the term “infectious respiratory particles” (IRPs) to describe respiratory particles containing pathogens that travel through the air.
- Recognition of the spectrum of IRP particle sizes and moving away from using aerosols and droplets to define IRP size.
- The use of “transmission through the air” as the overarching term to describe the movement of IRPs, with subcategories of “airborne/inhalation” and “direct deposition”.
- The term “particulate filter respirators” (PFR) is used to replace P2/N95 respirators to provide consistency.

The Position Statement considers current terminology and provides further recommendations for standardising terminology used to describe PPE, and to describe procedures and behaviours that can increase the release of IRPs and form part of the risk assessment for PPE use.

Read the full position statement here

## Why Cloth and Surgical Masks Fell Short: The Case for N95 Respirators (PFR) During COVID-19

During the COVID-19 pandemic, various types of masks were recommended and used. Emerging evidence suggests that only high filtration respirators such as N95 masks offered significant protection against airborne transmission. The tight fit and high filtration efficiency make N95 respirators particularly effective against airborne pathogens. Surgical masks provided better protection than no masks, however their loose fit and lower filtration capability limited their effectiveness in preventing COVID-19 transmission. Cloth masks were widely used by the public but demonstrated significantly lower effectiveness than surgical masks.

The effectiveness of any mask is heavily influenced by its fit. High quality masks and N95 masks may not provide adequate protection if not fitted correctly.

Read the full article here

## WHO’s 2024 Global Report: Strengthening Infection Prevention and Control Programs at the Facility Level

Despite the lessons learned during the COVID-19 pandemic, many health care organizations worldwide are still struggling to implement IPC principles effectively. The report reveals that many health systems often face a triple challenge: limited financial resources, a lack of ongoing training, and

inadequate leadership support, especially in low- and middle-income countries (LMICs). These barriers make it challenging to establish robust IPC foundations and are directly linked to higher rates of health care-associated infections (HAIs), increased risks to health care workers' safety, and rising health care costs.

**If the pandemic taught us anything, it is that IPC is not just about protocols; it is about building resilient, prepared systems.**

One of the most persistent challenges is the reliance on one-size-fits-all approaches that do not reflect the realities of local settings. Standard protocols are important, but they are not always enough. Cultural norms, resource constraints, and operational pressures all play a role, and if they are not addressed, even the best-designed guidelines can fall short. Add to this a lack of ongoing education, and many health care teams are left without the tools or confidence to apply IPC best practices effectively.

Leadership is another key piece of the puzzle. Without strong, visible support from leaders, IPC efforts often lack the traction and visibility they need to succeed. Leadership engagement is not just about signing off on policies; it is about championing IPC as a priority, aligning resources, and modelling the culture we want to see across health care settings.

Five ways to strengthen IPC Programs at facility level:

- Think in systems not silos – incorporate IPC into every aspect of health care delivery;
- Prioritise ongoing education;
- Get leaders actively involved;
- Engage the right stakeholders – collaborate with clinicians, patients and community.; and
- Use feedback to drive improvement – use routine monitoring and real time feedback.

With the right strategies and mindset, facilities everywhere, regardless of geography or budget, can build strong, sustainable IPC programs that protect both patients and the health care workforce.

Read the full article here

## ACORN Webinar

A webinar was presented on sustainability which is free to all ACORN members, or can be purchased by non-members.

Presentation 1: Greening the Operating Room: Strategies for Sustainable practices in Healthcare.
Presenter: Sarah Ripley
Presentation 2: The Future is in Our Hands: Committing to Sustainability for People and Planet
Presenter: Tony Cobbledick

Click here to access ACORN webinars

# LITERATURE

## Evaluating the Risk of *Clostridioides difficile* Infection from Toilet Flushing: A Quantitative Microbial Risk Assessment and Implications for Infection Control

*Clostridioides difficile* infection (CDI) remains a challenge in healthcare settings despite strict IPC measures. Whilst approximately 60% of cases are related to antibiotic exposure, recent studies have highlighted a growing number of cases in younger people and those without antibiotic exposure. The bacterium's ability to form spores which can remain airborne for extended periods and resist environmental stressors such as heat and hospital-grade disinfectants make control difficult. Overlooked transmission vectors such as toilet plume causing *C. difficile* airborne dispersion contributes to transmission. This study looked to quantify the risks associated with CDI transmission via toilet flushing. When an individual with CDI uses and flushes a toilet, C. difficile bioaerosols can be dispersed onto nearby surfaces and into the air, where they can remain suspended and be transported by air currents, thereby exposing subsequent toilet users. Asymptomatic carriers using shared toilets increase the potential for environmental contamination and *C. difficile* transmission.

The study found that a single flush can release *C. difficile* into the air, with bioaerosol concentrations up to 29.50 $\pm$ 10.52 colony forming units (cfu)/$m^3$ and deposit about 8-11 cfu on immediate surfaces. Despite a reduction in bacterial concentration post flush, bacteria persists on the inner walls. Toilet flushing increases relative humidity by approximately 31% within the first 10 minutes post flush, and this alters indoor air quality in a manner that supports pathogen survival, enhancing the viability and transmission of aerosolized *C. difficile*. Poor ventilation further exacerbates the risks. The flush button contact and inhalation followed by ingestion in frequent use hospital settings presents the highest risk.

The findings of this study could reform IPC practices, inform toilet design, and influence public health policies to better prevent the spread of *C. difficile*.

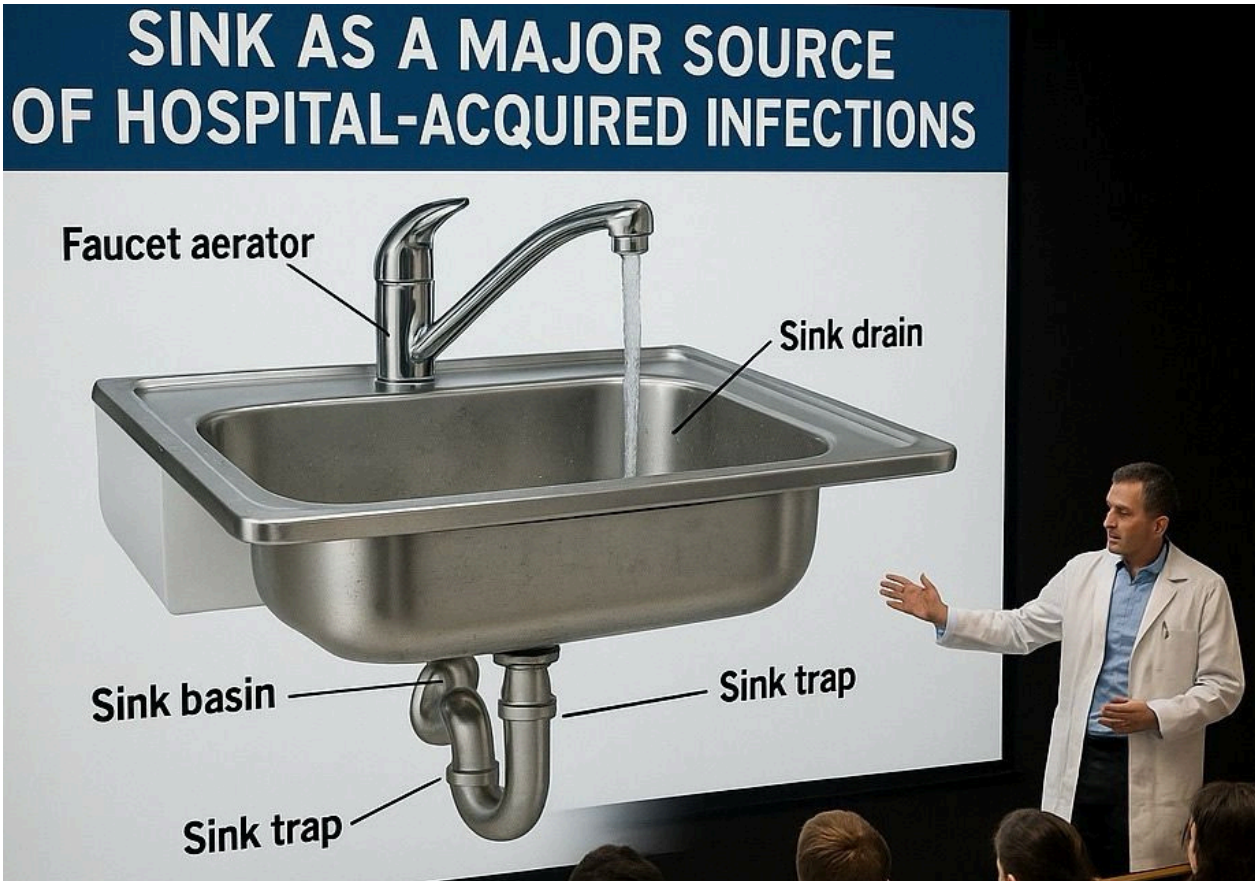
Read the full article here

## Sinks and Drainage Systems

There have been a number of recent studies looking at sinks and drains in relation to IPC issues such as infection risk, biofilm formation and antibiotic resistance. Three of the studies are outlined below.

### 1. Does Antibiotic Use Contribute to Biofilm Resistance in Sink Drains?

Biofilms are known to harbour multi-resistant organisms, and whilst there is evidence that bacteria spread from drains to the outside, there is little data relating to drain biofilms from hospitals. This study involved sampling and testing of sink drains from a German hospital where comprehensive antibiotic usage data was available.




The study found a correlation between the median of the multi-resistant marker *intl1* gene of the biofilm and the amount of administered antibiotics. Laboratory tests confirmed that even low level antibiotic residues can disrupt microbial balance and support the persistence of resistant organisms. The researchers concluded that each combination of biofilm and antibiotic produces distinct changes regarding community shifts and (initial) *intl1* prevalence. Testing of more biofilms and other sample sites in patients' rooms could extend the knowledge about correlation of resistance data and antibiotic use.

Antibiotics can enter the sink system in several ways: handwashing by staff with drug residues, rinsing medical equipment, excretion of drugs from patients, or use of personal care and cleaning products containing active compounds. When a moist, nutrient rich environment encounters trace antibiotics, the result is fertile ground for the development of resistant bacterial reservoirs.

The take away message is that drainage systems must be included in IPC strategies and facilities need to consider what they might inadvertently be disposing of into the drainage system.

Read the full article here.

### 2. This Is the Reinforcement We Cannot Afford to Give Biofilm – A Sink Is Not a Medical Waste Bin

Following on from the article above, a German study in 2024 collected biofilm samples from 20 sinks across four wards in a German Hospital and analysed the ward's antibiotic consumption and resistance characteristics of the bacteria found. The findings were striking - clinically relevant and resistant bacteria were found in every ward, and the higher the ward's antibiotic usage the higher the prevalence of multi-drug resistance.

As in the article above, several ways an antibiotic can enter the sink system were identified: handwashing by staff with drug residues, rinsing of medical equipment, excretion of drugs by patients, and the use of personal care and cleaning products containing active compounds. When a moist, nutrient rich environment encounters trace antibiotics, the result is fertile ground for the development of resistant bacterial reservoirs.

Drainage systems must be included in IPC strategies, and thought given to preventing antibiotics from entering the system.

Read the full article here

### 3. The Sink as a Source of Infection: Clinical Insights from Recent Studies on Hospital Drainage Systems

A year long (March 2022 to March 2023) surveillance across 5 wards in a Spanish Hospital examining the drainage system identified 1,058 bacterial strains. Key Findings included:

- 99.5% isolates were multidrug resistant, defined as resistant to at least three antibiotic classes;
- The most prevalent were *Pseudomonas aeruginosa* and *Stenotrophomonas spp*, consistently identified across all wards and times;
- Diverse species were found in each sampling, indicating ongoing recolonisation and microbial turnover, unaffected by routine cleaning;
- A Carbapenemase gene which confers high level resistance to carbapenem antibiotics was detected in multiple Pseudomonas species; and
- A newly opened ICU unit showed rapid colonisation of the plumbing system.

These findings raise a number of clinical implications:

- Risk of infection from aerosolised bacteria during handwashing, or rinsing of equipment;
- Rapid colonisation of newly constructed units; and
- Potential for outbreaks of resistant infections in vulnerable wards.

Recommendations made from these findings include:

- Enhanced drain disinfection;
- Improvements to sink infrastructure systems;
- Routine periodic sampling of drainage systems;
- Staff training and awareness of correct sink usage; and
- Testing methods to identify uncommon or resistant strains that may evade standard detection.

Read the full article here

## Appropriate and Safe Use of Chlorhexidine

Chlorhexidine is a broad-spectrum antiseptic, with activity against gram-positive and gram-negative bacteria, fungi, and viruses. Chlorhexidine containing products are widely used in health care, aged care and in the community. In healthcare, chlorhexidine containing products are widely used for hand hygiene and skin antisepsis. There is increasing concern about chlorhexidine resistance as it has been reported in a range of gram-negative and gram-positive bacteria species. These include *Staphylococcus aureus, Klebsiella pneumoniae, Mycobacterium* species, *Pseudomonas aeruginosa*, *Acinetobacter baumannii, Escherichia coli, Enterococcus faecalis* and *Candida albicans*. It has been suggested that chlorhexidine resistance may promote antimicrobial cross-resistance.

In peri-operative settings, there are risks associated with neurotoxicity when chlorhexidine containing products are used as skin preparation for regional anaesthesia and other procedures. Allergic reactions to chlorhexidine are rare.

Chlorhexidine plays an important role in infection prevention and control in health care, particularly in procedural settings. To support healthcare organisations and clinicians to use chlorhexidine appropriately and safely, the Safety and Quality Commission has developed the following guidance documents:

Appropriate and safe use of chlorhexidine in healthcare settings

Joint Safety Statement – Topical application of chlorhexidine and the risks of accidental injection in regional anaesthesia and vascular access procedures

## Improving Perioperative Bathing Compliance Through Standardised Protocols and Team Collaboration

A team of clinical leaders at Sinai Hospital and the University of Maryland Medical Center identified an issue with low compliance in perioperative bathing among surgical patients. Recognizing the known connection between preoperative hygiene and surgical site infections (SSI) they launched an initiative to evaluate and improve the process.

A literature review comparing the effectiveness of chlorhexidine gluconate (CHG) and antimicrobial soap revealed no significant difference between the two products reducing SSI. What mattered most was not which product was used, but how consistently and correctly it was applied.

An early finding was the lack of a standardised protocol across the surgical units. In response, clear and evidence-based protocols were developed, distributed and supported with training.

A core insight was that if patients didn't understand how to use a product, or could not afford a product, the protocol failed. By recognizing that a regular bath could be just as effective when properly completed, the team emphasised accessibility and patient-centre care. Improved compliance was the objective, not any particular product.

Read the full article here

## Foam or Liquid: Disinfection Decisions in Complex Healthcare Environments

The question is often asked, What works better – foam disinfectants or liquid agents? Dirty areas such as sink traps and floor drains are high risk zones for biofilm formation and multi-resistant bacteria as they often remain contaminated despite standard disinfection protocols.

Foam application offers better penetration and longer contact time but requires specialized equipment, training and may involve higher costs. Liquid disinfectants are easier to use, cost effective and widely available but are less effective in heavily contaminated or hard to reach areas e.g. deep sink traps.

Sometimes a combined approach works well, e.g. liquid disinfectant for daily cleaning and use of a foam disinfectant once or twice a month in high risk areas. It is not always about choosing one product over another, it is about responding to the situation with effective, scalable and sustainable solutions.

Read more here

## Quick and Dirty: Improper glove use increases infection risk and has global consequences

The development of disposable gloves and the discovery that good hand hygiene is essential for lowering rates of healthcare associated infection are among the most important developments in the history of infection prevention and control (IPC), and are both essential for protecting patients and healthcare workers.

International-level guidelines are in place for glove use and hand hygiene during patient care, but there are major issues in compliance, and inappropriate gloving and their overuse has led to a patient safety crisis of global proportions. Improper gloving reduces patient safety and increases HAIs, and their overuse leads to environmental degradation and supports labour rights abuses.

To many HCWs, knowledge gaps and misconceptions about glove use remain, and it is well known that a high percentage of missed opportunities for hand hygiene occur when the HCW is wearing gloves.

Moving forward, training HCWs in a way that ensures comprehension and raising awareness of the issues around glove use have been proven to reduce inappropriate glove use and improve hand hygiene in clinical practice.

Read the full article here

# NEWS AND EVENTS

## 10 April 2025: Interim guidance on alternative antisepsis products for minor procedures: joint recommendations from the Australasian College for Infection Prevention and Control (ACIPC), the Australasian Society for Infectious Diseases (ASID), and the Australian Vascular Access Society (AVAS)

Recent issues affecting supply of topical antiseptic products (mainly chlorhexidine) resulting from the Reynard product recall and changes in manufacturing have led to the development of some interim guidance on the use of alternative products as an adjunct to existing guidelines.

**Recommendations:**

- For all procedures requiring skin antisepsis, adherence to aseptic technique is essential.
- When considering replacement products, use like-for-like products where possible.
- When considering alternative products, undertake a risk assessment that includes both procedure-related and patient-related risk factors.
- 5% alcohol-based povidone-iodine solution should continue to be used for patients with chlorhexidine hypersensitivity. If insertion is close or through mucous membranes, use 10% aqueous povidone-iodine.
- Where bottled solution products may be used as a substitute for single-use preparations, implement additional contingency measures to minimise the risk of bottle contamination. E.g.
    - Use small volume bottles;
    - Mark bottles with date/time opened and discard 24 hours after opening; do not insert swabs/applicators into bottles; and
    - Have clearly separate processes for skin antisepsis and injectable medication.
- For minor procedure such as lumbar punctures/pleural taps that do not require prolonged retention of a catheter, use products containing lower concentrations of chlorhexidine-in-alcohol.
- 70% alcohol products (e.g. alcohol prep pads) can be used for:
    - Antisepsis for temporary skin breach without a retained catheter (e.g. venepuncture
    - Cleaning skin prior to subcutaneous drug administration (e.g. enoxaparin)
    - Microbial decontamination of needless connector hubs (“scrub the hub”).
- Administration of vaccines and medications via subcutaneous or intramuscular injection does not necessarily require skin antisepsis unless visibly dirty.

- All antiseptic products used for skin preparation should be allowed to dry completely prior to performing an invasive procedure.

Read the full article here

## Therapeutic Guidelines – Antibiotics: Updates March 2025 Release

The Antibiotic guidelines provide advice on managing almost 200 unique infections; from self-limiting infections treated in primary care, to life-threatening infections requiring intensive care support. This review of the guidelines has been staggered, with 3 main groupings of topics.

1. Topics completely revised or newly developed for the March 2025 release.
2. Topics under revision that will be published later in 2025 or 2026. To ensure alignment across the guidelines, some of these topics have been amended in the March 2025 release (identified by an amended date on the topic's page).
3. Topics that have recently undergone a complete review and did not require further comprehensive review for the March 2025 release. To ensure alignment across the guidelines, some of these topics have been amended in the March 2025 release (identified by an amended date on the topic's page).

Click Here for Details

## Australian Health Facility Guidelines – Content Update: Standard Components for Operating Suiters

Following extensive consultation with clinical and technical experts, the Operating Suite Standard Components has been updated. Key changes include:

- Improved clarity around medical services pendant requirements in the Operating Room – General and the Procedure Room – Endoscopy Standard Components.
- Redesign of the Anaesthetic Preparation Room.
- Development of the clean-up room to provide clear zones.
- Creation of a new Standard Component for an Exit Bay

The updated Standard Components include:

- ANAES – Anaesthetic Preparation Room (previously ANAE-16)
- B-SCRUB – Scrub Bay (previously SCRB-4)
- CLNUP – Clean-up Room (previously CLUP-10)
- STSS – Store - Sterile Stock (previously STSS-20)
- OR-GEN – Operating Room – General (previously ORGN)
- ENPR – Procedure Room - Endoscopy

The following Standard Component has been retired:

- STSS-CC – Store - Sterile Stock, Central Core

For full details click here

## National Safety and Quality Health Service (NSQHS) Standards (third edition)

The Australian Commission on Safety and Quality in Healthcare (the Commission) is preparing to develop the National Safety and Quality Health Service (NSQHS) Standards (third edition) in collaboration with the healthcare system and community representatives.

The Commission will seek feedback which will inform the development of the NSQHS Standards (3rd ed.) which will be released for consultation in 2026 and finalised during 2028.

Sign-up to the NSQHS Standards (third edition) subscriber list to receive information about how to get involved in the consultation.

### Showcasing antimicrobial stewardship best practice: 5 case studies

The Safety and quality Commission in Healthcare has developed 5 case studies showcasing best practice and innovation in antimicrobial prescribing in the Australian Healthcare system. Thes case studies can assist you in developing strategies to meet the antimicrobial stewardship actions of the Preventing and Controlling Infection Standard in the NSQHS Standards.

Read the case studies here

## Use the Safety and Quality in Health Care Commission's interactive dashboard with antimicrobial resistance data

Check out the new APAS Data Explorer, an interactive, map-based dashboard that displays information on the multidrug-resistant organisms reported to the Australian Passive AMR Surveillance system (APAS) system. Subscribe for the latest updates on AMR and look out for the CARAlert Data Explorer coming soon!

## NCAS 2025 Seminar Series Calendar


The NCAS monthly Seminar Series focus on all aspects of antimicrobial stewardship (AMS) and include (but are not limited to) the review of recent research, updates from conferences and new

innovations in technology.

The series feature experienced speakers and researchers across all sectors highlighting the importance of a one health vision for AMS.

You can join these meetings on the third Wednesday of every month at 8:30 AM – 9:30AM AEDT/AEST. Register Here

Details: Seminar Series

## World Hepatitis Day – July 28

The date of 28 July was chosen because it is the birthday of Nobel-prize winning scientist Dr Baruch Blumberg, who discovered hepatitis B virus (HBV) and developed a diagnostic test and vaccine for the virus.

The aim is to achieve global elimination by 2030. Low coverage of testing and treatment is the most important gap to be addressed to achieve this goal.

**Do you know your hepatitis B immune status?**

**Click here for WHO - World Hepatitis Day Campaign details**

## GENCA Fundamental or Reprocessing Workshop

This workshop provides an essential introduction to the reprocessing of flexible endoscopes. Key topics include:

- Structure and function of endoscopes
- Infection prevention and control
- Water filtration
- Workplace health and safety

Designed for nurses, CSSD technicians, and assistants involved in endoscope reprocessing, this workshop offers practical, in-depth knowledge to support your professional development.

Date: Saturday 18 October 2025
Time: 8:30am – 4:00pm
Venue: Quest Apartments - 8 Pakenham St, Fremantle

Registrations Open


**Important Dates:**

- **Registration Open**: Now open - Click here to register
- **Early Registration Discount Closes:** 1 October 2025

# Contact

For feedback, partnerships, or further information, please feel free to contact us at info@handsoninfectioncontrol.com.au

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