

Infection Control in Long Term Care/Aged Care Facilities



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*The Persatuan Kawalan Infeksis & Antimicrobial Kota Kinabalu Sabah (PKIAKKS)
6th Borneo Infection Control Congress
Kompleks Pentadbiran Kerajaan Persekutuan Sabah, Kota Kinabalu Sabah
20th-21st September 2018.*

The changing healthcare system

Limiting acute care hospitalisation

A higher threshold for admission to an acute care facility

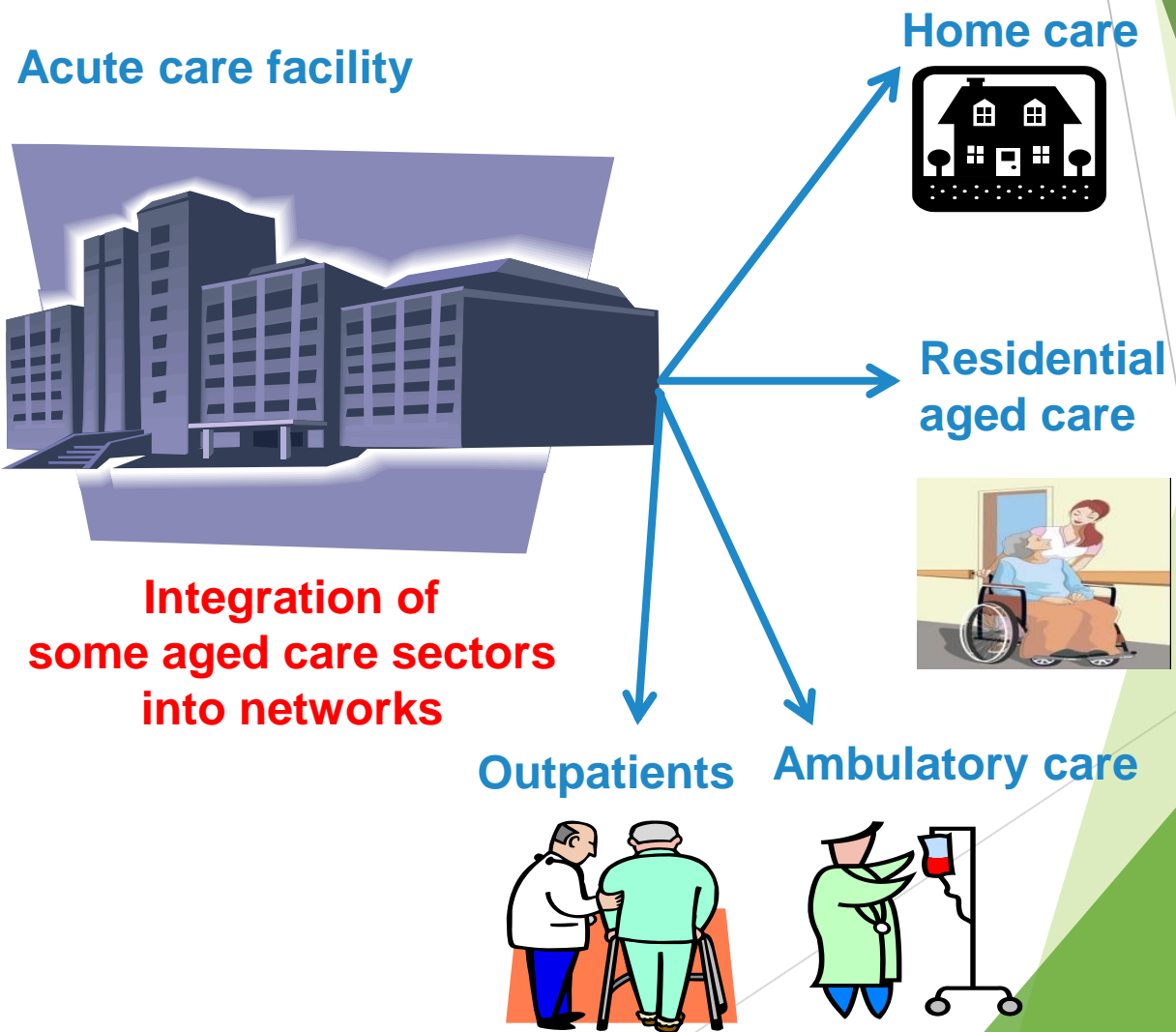
More rapid transfer or discharge to non acute care facilities

↑ acuity of patients in aged care facilities

Higher intensity of care delivered on site

Expanding population of patients requiring a higher level of care – more devices

Transfer of patients between acute and residential aged care facilities becoming more common



Infections in aged care facilities

- ▶ Patients in aged care facilities have an ↑ risk of infection
- ▶ Ageing-associated changes in organ systems
- ▶ Gradual deterioration in immune function
- ▶ Chronic diseases
 - ▶ Cerebrovascular disease
 - ▶ Dysphasia or impaired consciousness may have repeated aspiration and risk of pneumonia
 - ▶ Cardiorespiratory disease
 - ▶ ↑ likelihood of developing influenza and complications



Infections in aged care facilities

- ▶ Dependant oedema due to CCF or venous disease
 - ▶ Greater risk of lower extremity cellulitis
- ▶ Respiratory failure
 - ▶ Chronic respiratory therapy/tracheostomy
- ▶ Renal failure
 - ▶ Dialysis and the use of devices
- ▶ Functional impairment
 - ▶ Dementia, incontinence of bowel and bladder, impaired mobility
 - ▶ Transmission of infecting organisms between patients because of environmental contamination



Infections in aged care facilities

- ▶ ↑ use of invasive devices
- ▶ Transmission of organisms amongst patients and staff
 - ▶ Outbreaks

Reported rates of infection

	Prevalence %	Incidence/1,000 days
All infections	2.4 - 32.7	2.6 - 9.5
Urinary tract	0.6 - 21.8	0.1 - 2.4
Respiratory tract	0.3 - 3.7	0.46 - 4.4
Skin/soft tissue	1.0 - 8.8	0.09 - 2.1

Outbreaks

- ▶ Frequently observed in aged care facilities
 - ▶ Respiratory
 - ▶ Gastrointestinal
 - ▶ *Norovirus*
 - ▶ *Salmonella species*
 - ▶ *Clostridium difficile*
 - ▶ Viruses
 - ▶ Influenza A & B
 - ▶ Rotavirus
 - ▶ Hepatitis B
 - ▶ Bacteria
 - ▶ Skin
 - ▶ *Staphylococcus aureus*

Horror flu season sees 16 aged care deaths in Canberra but authorities contain far worse

By Glynis Quinlan - 18 October 2017 0

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Home / News / Victoria News

JULY 5 2017

SAVE PRINT LICENSE ARTICLE

Gastro outbreak strikes hospitals and aged care homes

Ebony Bowden | Aisha Dow

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A wave of gastroenteritis has struck hospitals and aged care homes in Melbourne's eastern suburbs.

Relatives have been shocked to discover they could not visit their loved ones, or were forced to don protective gear.



Experts warning: gastroenteritis strain discovered in Victoria

A strain of 'norovirus' is believed to have been responsible for most gastro outbreaks in Victoria, sparking a health department warning.

An advertisement for The Bradford Exchange featuring various Christmas decorations. The items are arranged in a grid with their prices listed below them:

- Top left: A snow globe with a snowman, \$69.99
- Top right: A Christmas tree with lights, \$299.95
- Middle left: A Christmas tree with lights, \$299.95
- Middle right: A Christmas tree with lights, \$299.95
- Bottom left: A set of three lanterns, \$129.98
- Bottom right: A Christmas wreath, \$249.95
- Bottom left (second row): A Santa Claus figurine, \$399.95
- Bottom right (second row): A snow globe with a snowman, \$199.95
- Bottom left (third row): A Christmas tree with lights, \$299.95
- Bottom right (third row): A set of three lanterns, \$129.98

The logo for The Bradford Exchange is at the bottom.

Advertisement

Outbreaks

- ▶ Respiratory
 - ▶ *Streptococcus pneumoniae*
 - ▶ *Legionella*
 - ▶ *Bordetella pertussis* (whooping cough)
- ▶ Other
 - ▶ VRE
 - ▶ Enterobacter
- ▶ Fungal
 - ▶ *Trichophyton* species (Tinea, ringworm)
- ▶ Parasites
 - ▶ *Giardia lamblia*
 - ▶ Scabies

ABC NEWS LOCATION: Melbourne, Vic [Change](#)

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Aveo resident diagnosed with scabies claims company covered up skin condition outbreak

By [Isobel Roe](#)
Updated 31 Aug 2017, 8:59am

Dozens of cases of a scabbing skin condition at a south-east Queensland retirement village have been "covered up" and poorly managed by village owners Aveo, residents claim.

The ABC has been told at least 20 people in unassisted residential living at Aveo Albany Creek in Brisbane's north have been treated by various doctors for the same skin condition in the last few months — some of whom have been diagnosed with scabies.

It is understood at least one resident was admitted to hospital with the condition.

But in a statement, Aveo said it was only aware of one person who had been diagnosed with scabies, although up to 10 residents had contracted a "skin condition" in the past 18 months.



PHOTO: Aveo says up to 10 residents had contracted a skin condition in the past 18 months. (Supplied)

MAP: Albany Creek 4035

Influenza

- ▶ Symptoms
- ▶ Sudden onset of:
 - ▶ Fever
 - ▶ Headache
 - ▶ Muscle and joint pain
 - ▶ Feeling tired
 - ▶ Sore throat



During influenza outbreaks, prompt action can help control spread

Influenza

- ▶ **Take precautions**
 - ▶ Standard and Droplet precautions
- ▶ **Confirm the case**
 - ▶ Respiratory specimens
 - ▶ Rapid laboratory testing for influenza and other viruses
 - ▶ Contact your local laboratory for advice
- ▶ **Set up an outbreak control team**
 - ▶ Set up an outbreak control team
 - ▶ Clinical
 - ▶ Infection control
 - ▶ Management
- ▶ **Notify patients doctor**
- ▶ **Notify the Department of Health**







Influenza

- ▶ **Isolate ill residents and restrict staff and visitors**
 - ▶ Isolate residents with symptoms
 - ▶ Confine to their rooms for five days after the onset of illness or until symptoms have completely resolved
 - ▶ Exclude staff with influenza-like illness from work for five days from the onset of symptoms or until symptoms have resolved
 - ▶ Ill residents should use separate toilet and bathroom facilities
 - ▶ Avoid moving residents
 - ▶ Cancel group activities
 - ▶ Discourage visitors during the outbreak
 - ▶ Postpone transfers, new admissions
 - ▶ Before sending residents to hospital, inform the hospital and transport staff of the outbreak

STOP **Visitors**
See a nurse for information before entering the room

For all staff
Droplet Precautions
in addition to Standard Precautions

Before entering room	On leaving room
 1 Perform hand hygiene	 1 Dispose of mask
 2 Put on a surgical mask	 2 Perform hand hygiene

Standard Precautions

And always follow these standard precautions

- Perform hand hygiene before and after every patient contact
- Use PPE when risk of body fluid exposure
- Use and dispose of sharps safely
- Perform routine environmental cleaning
- Clean and reprocess shared patient equipment
- Follow respiratory hygiene and cough etiquette
- Use aseptic technique
- Handle and dispose of waste and used linen safely

AUSTRALIAN COMMISSION
ON SAFETY AND QUALITY IN HEALTH CARE

Influenza

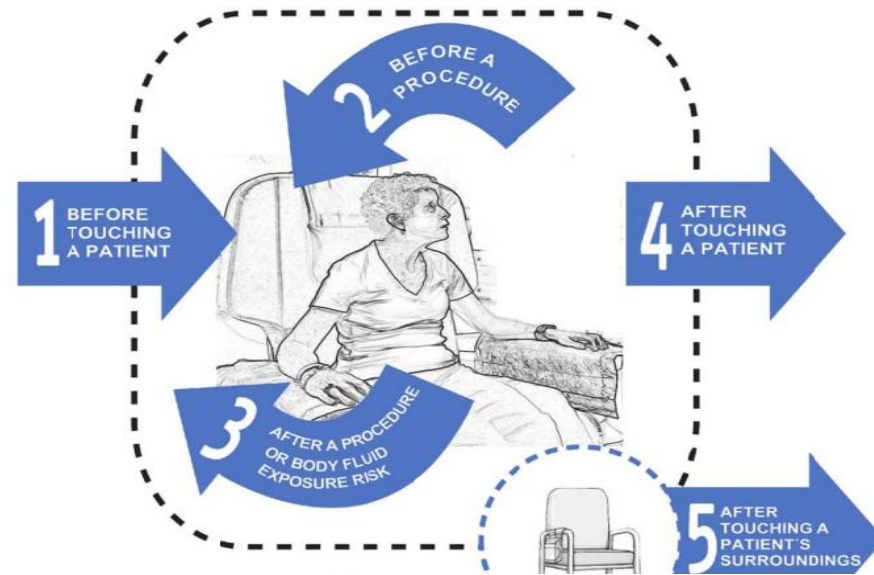
► Wash your hands regularly

- Reinforce the need for frequent hand washing
- Post hand washing signs
- Before and after touching ill residents
- After touching ill residents' environment, including used tissues
- After touching ill residents' respiratory secretions
- If your hands are not visibly soiled use a alcohol hand rub

► Wear a mask

- A fluid-repellent surgical mask
- When you enter the resident's room or when you are working within one metre of the resident
- Remove the mask when you leave the resident's room then wash your hands

5 Moments for HAND HYGIENE



1	BEFORE TOUCHING A PATIENT	W
2	BEFORE A PROCEDURE	W
3	AFTER A PROCEDURE OR BODY FLUID EXPOSURE RISK	W
4	AFTER TOUCHING A PATIENT	W
5	AFTER TOUCHING A PATIENT'S SURROUNDINGS	W



Hand hygiene posters available at <http://www.hha.org.au/>

Influenza

- ▶ **Wear gloves and gown**
 - ▶ Wear gloves if you expect that your hands will come in contact with blood or body substances (including respiratory secretions)
 - ▶ Wash your hands after removing and disposing of gloves
 - ▶ Change gloves, gowns and mask after each encounter and wash your hands thoroughly
- ▶ **Keep your environment clean**
 - ▶ Handrails, chair arms, doorknobs, hand basins, taps, toilet handles
 - ▶ Provide residents with tissues and appropriate disposal containers



Influenza

- ▶ **Consider anti-influenza medication**
 - ▶ Anti-viral medications can be used to treat those who are ill with influenza
 - ▶ These medications can shorten the duration of illness
- ▶ **Immunise staff and residents every year**
 - ▶ To prevent outbreaks, arrange vaccination for all residents and staff before winter each year
 - ▶ If an outbreak occurs, encourage vaccination of all unvaccinated residents and staff (including volunteers) and suggest that visitors also be vaccinated



**GET THE FLU SHOT
BEFORE THE FLU GETS YOU**
Flu shot available now

You may be eligible for a free flu shot
under the National Immunisation Program
Talk to your doctor or nurse about the flu vaccine

**FOR MORE INFORMATION VISIT:
WWW.IMMUNISE.HEALTH.GOV.AU**

Viral gastroenteritis

- ▶ **Viral gastroenteritis outbreaks**
 - ▶ Highly infectious and outbreaks are common
 - ▶ Alert staff, students, residents and visitors to the outbreak
- ▶ **Hand washing**
 - ▶ Thorough and frequent hand washing
 - ▶ Before and after any patient care
 - ▶ After touching ill residents' environment
 - ▶ After contact with a person with gastroenteritis
 - ▶ After going to the toilet
 - ▶ Before eating or preparing/handling food



Viral gastroenteritis

▶ Isolation and restriction

- ▶ Separated from non-infected residents
- ▶ Separate toilet and bathroom
- ▶ Avoid the transfer of patients between and within institutions until the outbreak is over
- ▶ Before sending residents to hospital, inform the hospital and transport staff of the outbreak
- ▶ Staff members with gastroenteritis should be excluded from work until 48 hours after their symptoms have stopped
- ▶ Visitors should be discouraged from attending the premises while the outbreak is occurring
- ▶ Discourage visitors while the outbreak is occurring

▶ Cleaning

- ▶ All touchable surfaces
- ▶ Surfaces or objects that have been exposed to vomit or faeces must be thoroughly cleaned
- ▶ Wash the surface or object with a neutral detergent
- ▶ Disinfect the surfaces and objects with freshly prepared hypochlorite 1,000 ppm (0.1 per cent) solution
- ▶ Allow objects to dry thoroughly after they have been cleaned

Viral gastroenteritis

► Protect yourself

- Standard and Contact precautions
- Wash your hands after you have removed gloves and protective clothing

► Notification

- Patients doctor and family
- Department of Health

► Keep track

- Document:
 - Number of cases
 - Dates of onset of symptoms
 - Duration of symptoms

STOP **Visitors**
See a nurse for information before entering the room

For all staff
Contact Precautions
in addition to Standard Precautions

Before entering room	On leaving room
 1 Perform hand hygiene	 1 Dispose of gloves
 2 Put on gown or apron	 2 Perform hand hygiene
 3 Put on gloves	 3 Dispose of gown or apron
	 4 Perform hand hygiene

Standard Precautions

And **always** follow these **standard precautions**

- Perform hand hygiene before and after every patient contact
- Use PPE when risk of body fluid exposure
- Use and dispose of sharps safely
- Perform routine environmental cleaning
- Clean and reprocess shared patient equipment
- Follow respiratory hygiene and cough etiquette
- Use aseptic technique
- Handle and dispose of waste and used linen safely



side view

ting Larry - A demonstration and explanation from his creator

Vomiting Larry

<https://www.youtube.com/watch?v=sLDSNvQjXe8>

Scabies

▶ Scabies

- ▶ An itchy skin condition caused by tiny mites
 - ▶ *Sarcoptes Scabiei*
 - ▶ Eight legged creatures with a round body
 - ▶ The female mite burrows under the skin, lays eggs and dies
- ▶ The eggs hatch into mites which live for 30 days
- ▶ **Scabies is not a sign of poor hygiene**
- ▶ **Spread**
 - ▶ Close body contact, contact with infested clothes or bedding (occasionally)



Scabies

► Scabies

- Intense skin itchiness
- Worse at nights and after hot baths/shower
- Scratch marks
- Red pimple - like rashes especially over palms and soles
- Short, dark wavy lines on the skin (burrows)

► **Note : The itchiness is due to allergic reaction to the mite**

► Common sites of infection:

- Web space between fingers
- Palms
- Inner aspect of wrists
- Other areas include :genital areas buttocks, around the navel arm pits, elbows, feet and ankles



Crusted (Norwegian) scabies



Severe form of scabies

- Immunocompromised (have a weak immune system), elderly, disabled or debilitated
- Typical scabies 10-15 mites per person
- Crusted scabies mites up to two million - therefore more contagious

Antimicrobial Resistant Pathogens

▶ Antimicrobial resistant organisms

- ▶ MRSA
- ▶ VRE
- ▶ *Clostridium difficile*
- ▶ Multidrug resistant E.Coli
- ▶ *Acinetobacter*
- ▶ *Enterobacter*
- ▶ Pseudomonas

▶ Risk factors

- ▶ Cross transmission
 - ▶ Environmental contamination
 - ▶ Contamination of healthcare worker hands
- ▶ Residents acquiring colonisation/infection in an acute care facility
- ▶ Exposure to antibiotics
 - ▶ Inappropriate antimicrobial use
 - ▶ Ranging from 25%-75%
- ▶ Lack of hand washing facilities
- ▶ Lower levels of registered nursing staffing

Antimicrobial prescribing and infections in Australian residential aged care facilities

▶ RACFs with high antimicrobial use

- ▶ Increased risk for all residents
- ▶ Potential for cross-transmission among residents

▶ Survey

- ▶ 186 RACFs - June and August 2015
- ▶ Individual facilities conducted a single-day (point prevalence) survey
- ▶ 69.9% were in Victoria
- ▶ Surveyors
 - ▶ Infection control practitioners (57.5%), nurses (35.5%) and pharmacists (11.0%)
- ▶ All residents were assessed for signs or symptoms of a suspected or confirmed infection, and/or a current prescription for antimicrobial therapy

Antibiotic



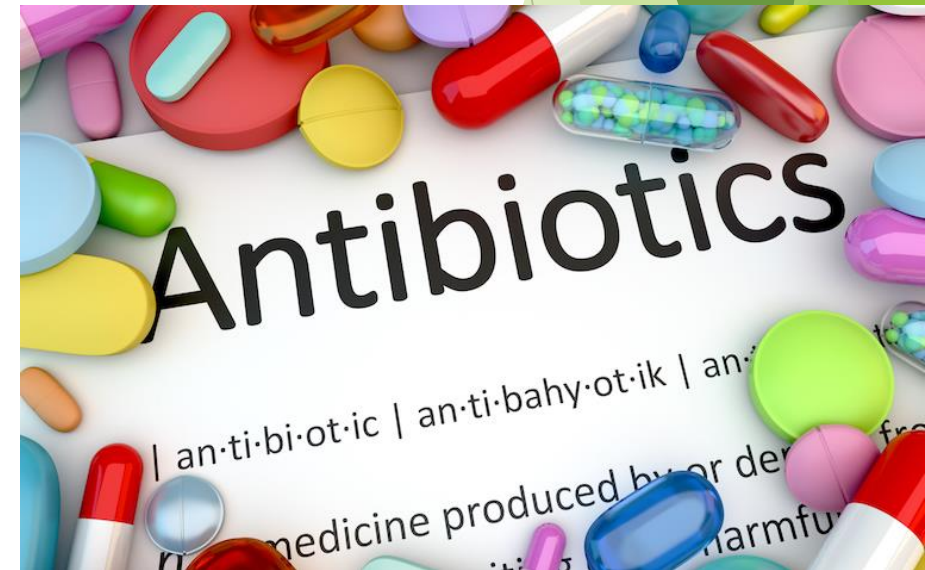
Resistance

Antimicrobial prescribing and infections in Australian residential aged care facilities

► Summary findings

- RACF residents with signs and symptoms of infection was 4.5%
- Residents prescribed one or more antimicrobials was 11.3%
- In total, 975 antimicrobials were prescribed for 824 residents
- The five most commonly prescribed antimicrobials - cephalexin (16.7%), clotrimazole (16.5%), amoxicillin-clavulanate (6.5%), trimethoprim (6.5%) and chloramphenicol (6.4%)
- Topical antimicrobials were frequently prescribed (37.1%)
- **Five most common indications for antimicrobial prescribing were:**
 - Skin, soft tissue or mucosal infections (17.5%)
 - Urinary tract infections (16.7%)
 - Lower respiratory tract infections (11.8%)
 - Tinea (8.4%)
 - Conjunctivitis (5.2%)

*Antimicrobial prescribing and infections in Australian residential aged care facilities
Results of the 2015 Aged Care National Antimicrobial Prescribing Survey pilot, May 2016*



Antimicrobial prescribing and infections in Australian residential aged care facilities

- ▶ Results identified three key areas for targeted quality improvement interventions:
 - ▶ **Inadequate documentation**
 - ▶ 31.6% of prescriptions did not have an indication documented justifying their use
 - ▶ 65.0% of prescriptions did not have a review or stop date documented
 - ▶ **Use of antimicrobials for unspecified infections**
 - ▶ 17.5% of antimicrobials were being used for unspecified skin infections
 - ▶ **Prolonged duration of prescriptions**
 - ▶ 31.4% of prescriptions had been prescribed for longer than six months; of these
 - ▶ Only 51.0% had an indication documented and
 - ▶ Only 2.0% had a review or stop date recorded

Antimicrobial prescribing and infections in Australian residential aged care facilities

- ▶ *Subset of prescriptions that had a known start date, were prescribed within six months of the survey date and were not prescribed for prophylaxis*
 - ▶ 548 prescriptions
 - ▶ Only 23.9% had a microbiological specimen collected in the week before the antimicrobial start date
 - ▶ 21.7% were prescribed for residents who did not have any documented signs or symptoms of infection in the week before the antimicrobial start date



Antimicrobial prescribing and infections in Australian residential aged care facilities

- ▶ 2017 acNAPS survey
- ▶ 19 June - 1 September 2017
- ▶ 293 participating ACHs
- ▶ On the day of the survey:
 - ▶ Nurses, pharmacists and infection control practitioners collect data
 - ▶ Residents:
 - ▶ Signs and symptoms of infection
 - ▶ Prescribed an antimicrobial
- ▶ Residents medication charts reviewed
 - ▶ 12 344 permanent, respite or transitional care



Antimicrobial prescribing and infections in Australian residential aged care facilities

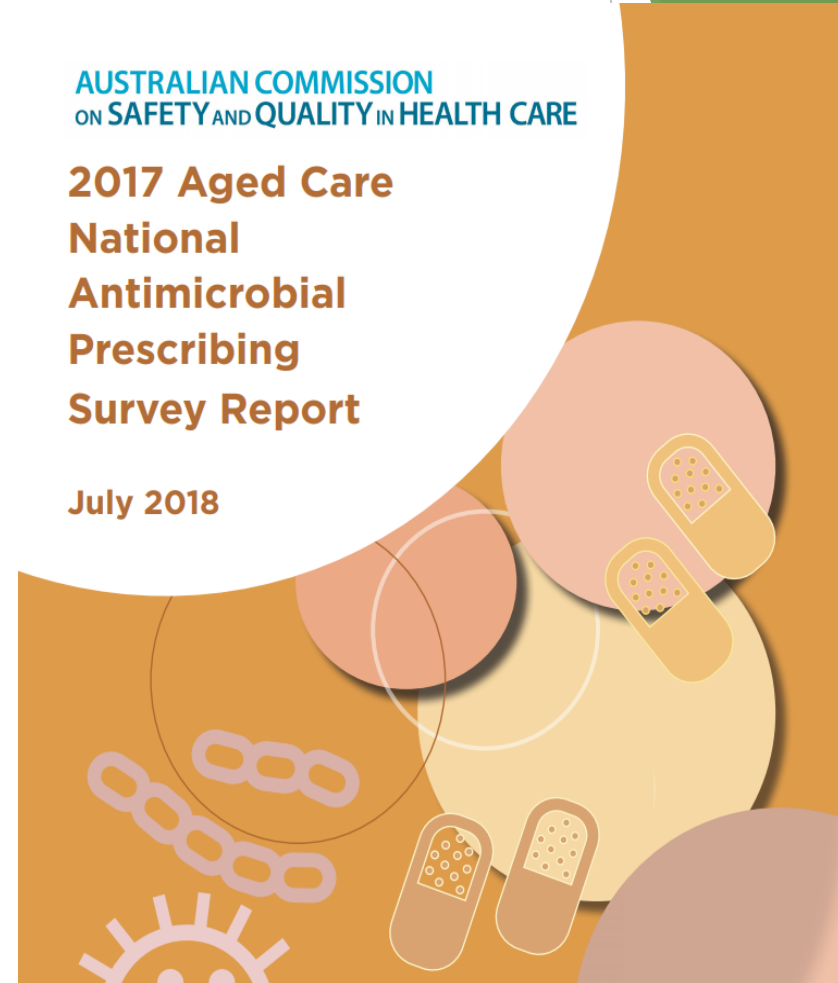
► Results

- 8.9% of residents were prescribed at least one antimicrobial
- 2.9% of residents had signs or symptoms of infection
- Cephalexin (20.0%) was the most commonly prescribed antimicrobial
- Three most common indications for prescribing antimicrobials:
 - Skin or soft tissue (31.7%)
 - Urinary tract (26.7%)
 - Respiratory tract (20.8%)

AUSTRALIAN COMMISSION
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2017 Aged Care National Antimicrobial Prescribing Survey Report

July 2018



Antimicrobial prescribing and infections in Australian residential aged care facilities

- ▶ Results.....
 - ▶ 33.2% of antimicrobials were prescribed for residents who had no signs or symptoms of infection in the week prior to the antimicrobial start-date
 - ▶ 51.6% of suspected infections did not meet the McGeer and colleagues criteria
 - ▶ **21.8% of antimicrobials had been administered for longer than 6 months**
 - ▶ 29.5% of prescriptions were for topical antimicrobials
 - ▶ 22.1% of antimicrobials administered the indication for the antimicrobial was not documented
 - ▶ 49.3% of antimicrobials administered the review- or stop-date was not documented

Infection Control in aged care facilities

▶ Infection Control Programs

▶ Goals

- ▶ Limit morbidity and mortality attributable to infections acquired in the aged care facility
- ▶ Prevent infections in staff members
- ▶ Minimise the cost of infection

▶ Restrictive measures to decrease transmission

- ▶ Undesirable
- ▶ May ↓ socialisation/rehabilitation/mobility

Infection Control in aged care facilities

- ▶ Infection Control Programs
- ▶ A balance between:
 - ▶ Decreasing morbidity and mortality and
 - ▶ The residents quality of life
- ▶ Clear evidence of risk to other residents and staff:
 - ▶ Selected residents at high risk of dissemination of organisms
 - ▶ Residents who have VRE and diarrhoea or uncontrolled incontinence of stool
 - ▶ Failure of incontinence aids
 - ▶ Extensive skin lesions colonised with MRSA and lesions that cannot be covered
 - ▶ Respiratory illness

Infection Control in aged care facilities

- ▶ Elements of an infection control program
 - ▶ Infection Control Committee & Infection Control team
 - ▶ Small facilities
 - ▶ Infection Control Consultant, Nursing Director, Medical Director, administrator
 - ▶ Large facilities
 - ▶ Consultant pharmacists, infection control expert, physical therapy/rehabilitation representatives, environmental services staff
 - ▶ Corporate infection control programs
 - ▶ Alliances with acute care facilities/other aged care facilities



Infection Control in aged care facilities

- ▶ Elements of an infection control program.....
- ▶ Dedicated infection control staff
 - ▶ Trained in infection control
 - ▶ Adequate time to coordinate infection control activities
 - ▶ Infrastructure support
 - ▶ i.e. Computer
 - ▶ Responsible for day to day management of the program
 - ▶ Oversight by a committee
- ▶ Formation of teams for outbreak management
 - ▶ Geriatric clinician, infection control consultant and nursing staff



get your
PPE
ON!



Infection Control in aged care facilities

▶ Policies and procedures

- ▶ Specific common diseases
 - ▶ Influenza
 - ▶ Gastroenteritis
 - ▶ Scabies
- ▶ Standard precautions
- ▶ Additional precautions
- ▶ Exposure management

▶ Policies and procedures

- ▶ Sterilisation and disinfection of equipment
- ▶ Environmental management
 - ▶ Cleaning and housekeeping
 - ▶ Laundry
 - ▶ Waste disposal
 - ▶ Food preparation and distribution

Develop, implement, review & update on a regular basis

Infection Control in aged care facilities

▶ Immunisation

- ▶ Routine
 - ▶ Resident vaccination program
 - ▶ Staff vaccination program
- ▶ Prevents infection
- ▶ Limits antimicrobial use

▶ Written facility policy and plan

- ▶ Training for staff including physicians on immunisation plan
- ▶ Collection and recording of baseline vaccination rates for current residents
- ▶ Initiation of vaccination of current and new arrivals
- ▶ Surveillance of acute febrile respiratory tract illnesses



Infection Control in aged care facilities

▶ Surveillance

- ▶ Identify persons with infections
- ▶ Identify potential outbreaks

▶ Standardised definitions

- ▶ Common infections in aged care settings
 - ▶ Signs and symptoms must be new or acutely worse
 - ▶ Not dependant on microbiological/radiological findings
 - ▶ Include worsening mental or functional status of the resident



Infection Control in aged care facilities

▶ Surveillance program

- ▶ Staff identify resident with possible infection
 - ▶ Temperature, other vital signs, pain, mental and functional status
- ▶ Relay information to the registered nurse
- ▶ Registered nurse performs clinical assessment
- ▶ Report significant findings to designated infection control nurse
 - ▶ Validation using standardised definitions
- ▶ Report significant findings to GP
- ▶ Training is required to support a surveillance program

Infection Control in aged care facilities

▶ Outbreak management

- ▶ Prior planning
 - ▶ Policies prepared in advance
 - ▶ Resources, leadership, authority
- ▶ Defining a case
- ▶ Prompt and early identification of potential cases/clusters
 - ▶ Influenza
 - ▶ Gastroenteritis
 - ▶ Skin infections
 - ▶ Scabies
- ▶ Obtain specimens
- ▶ Patient, visitor and staff restrictions



Infection Control in aged care facilities

▶ Hand Hygiene

- ▶ Improve hand hygiene practices
 - ▶ Hand washing
 - ▶ Alcohol based hand rubs

▶ Glove use

- ▶ Gloves reduce hand contamination by 70-80% and protect patients and healthcare workers

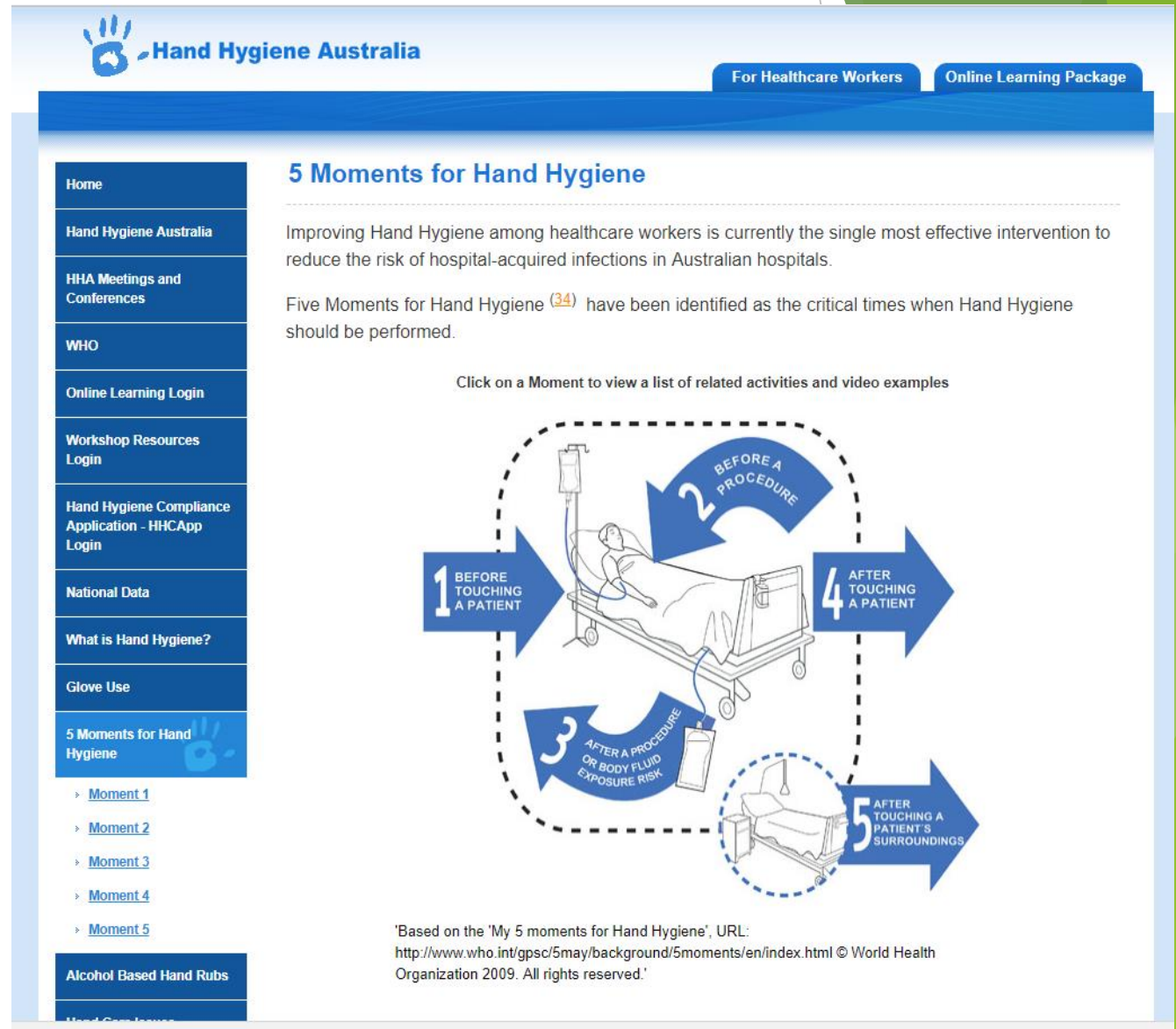


Hand hygiene Australia

► Resources

- Online learning package
- Posters
- Educational material
- Frequently asked questions
- eBulletin
- DVDs

<http://www.hha.org.au>



The screenshot shows the Hand Hygiene Australia website interface. At the top, there is a logo for Hand Hygiene Australia and navigation tabs for 'For Healthcare Workers' and 'Online Learning Package'. A left-hand navigation menu lists various resources, with '5 Moments for Hand Hygiene' highlighted. The main content area is titled '5 Moments for Hand Hygiene' and includes an introductory paragraph, a list of moments, and a diagram illustrating the five moments around a patient in a hospital bed.

Hand Hygiene Australia

For Healthcare Workers | Online Learning Package

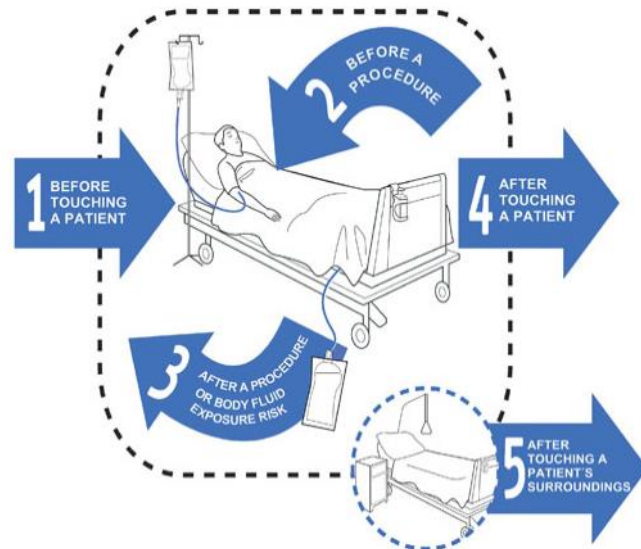
Home
Hand Hygiene Australia
HHA Meetings and Conferences
WHO
Online Learning Login
Workshop Resources Login
Hand Hygiene Compliance Application - HHCAApp Login
National Data
What is Hand Hygiene?
Glove Use
5 Moments for Hand Hygiene
► [Moment 1](#)
► [Moment 2](#)
► [Moment 3](#)
► [Moment 4](#)
► [Moment 5](#)
Alcohol Based Hand Rubs

5 Moments for Hand Hygiene

Improving Hand Hygiene among healthcare workers is currently the single most effective intervention to reduce the risk of hospital-acquired infections in Australian hospitals.

Five Moments for Hand Hygiene ^(3,4) have been identified as the critical times when Hand Hygiene should be performed.

Click on a Moment to view a list of related activities and video examples



The diagram illustrates the five moments for hand hygiene around a patient in a hospital bed. The moments are represented by numbered arrows: 1. BEFORE TOUCHING A PATIENT (pointing to the patient), 2. BEFORE A PROCEDURE (pointing to the patient), 3. AFTER A PROCEDURE OR BODY FLUID EXPOSURE RISK (pointing to a hand sanitizer bottle), 4. AFTER TOUCHING A PATIENT (pointing away from the patient), and 5. AFTER TOUCHING A PATIENT'S SURROUNDINGS (pointing to a bedside table).

'Based on the 'My 5 moments for Hand Hygiene', URL: <http://www.who.int/gpsc/5may/background/5moments/en/index.html> © World Health Organization 2009. All rights reserved.'

Infection Control in aged care facilities

- ▶ Infection Control Education and Training
 - ▶ On employment and regularly thereafter
 - ▶ Infections in aged care facilities
 - ▶ Local surveillance data
 - ▶ Approached to controlling infections
 - ▶ Basic hygiene
 - ▶ Hand hygiene
 - ▶ Standard precautions
 - ▶ Additional precautions
 - ▶ Staff health
 - ▶ Avoidance of injuries with sharps
 - ▶ Appropriate waste disposal



Infection Control in aged care facilities

▶ Antimicrobial use

- ▶ More judicious use of antibiotics in the aged care setting may limit antibiotic resistance
 - ▶ Systematic evaluation of antimicrobial use in the facility
 - ▶ Inappropriate use
 - ▶ Continued antimicrobial exposure despite no clinical evidence of infection
 - ▶ Antimicrobial therapy with agents to which organisms from appropriate clinical specimens are not susceptible
- ▶ Re-evaluation of residents with suspected infection after 48-72hrs after initial empiric antimicrobial therapy
- ▶ For those residents in whom the clinical course does not suggest infection clinicians should consider discontinuation of antimicrobial therapy
- ▶ Inappropriate use leads to increased costs, increases risk of antibiotic resistant pathogens and risk of adverse reactions



Good cleaning & housekeeping

- ▶ Routine cleaning
 - ▶ Policies and procedures
 - ▶ Checklists
- ▶ Cleaning and disinfection of environmental surfaces
 - ▶ Touchable surfaces
 - ▶ Taps, door handles, toilet handles, cot sides, toys
- ▶ Handling linen
 - ▶ Soiled clothing
 - ▶ Mattress covers
 - ▶ Linen bins
- ▶ Education and training
 - ▶ Dedicated equipment
 - ▶ Disinfectant concentration



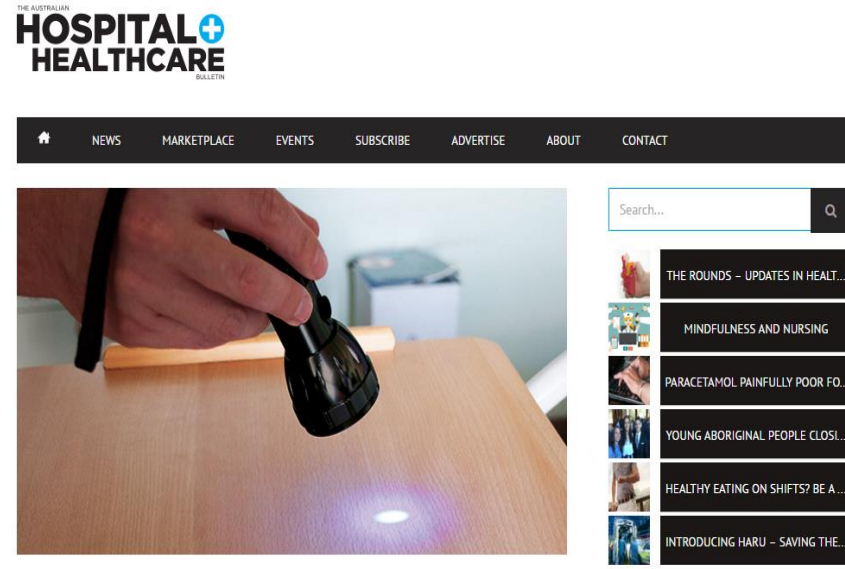
Monitoring the effectiveness of cleaning and disinfection

- ▶ Visual assessment-not a reliable indicator of surface cleanliness
- ▶ Fluorescent markers
 - ▶ Transparent, easily cleaned, environmentally stable solution fluoresces when exposed to an ultraviolet light
 - ▶ Applied prior to cleaning and assessed after cleaning with a black light



Florescent (invisible marker/pen) monitoring

► Florescent markers



As clean as it looks – Using Florescent marker audits to evaluate cleaning efficacy



Monitoring the effectiveness of cleaning and disinfection

ROOM CLEANING CHECKLISTS

CLEANING CHECKLIST CLINICAL ROOMS/AREAS

DAILY ROUTINE - ROOMS/AREAS CLEANING AND DISINFECTION CHECKLIST								
WEEK COMMENCING DATE:								
ROOM NAME/NUMBER:								
TICK THE BOX								
DAILY ROUTINE CLEANING <input type="checkbox"/>								
	Room surfaces	Mon ✓ or N/A	Tues ✓ or N/A	Wed ✓ or N/A	Thurs ✓ or N/A	Fri ✓ or N/A	Sat ✓ or N/A	Sun ✓ or N/A
1	Empty rubbish bins – spot clean if necessary							
3	Clean and disinfect all touchable surfaces							
4	Clean and disinfect light switches							
5	Clean and disinfect room sinks including the basin, tap handles and backsplash							
6	Clean and disinfect the outer surface of the hand soap pump dispenser							
7	Clean and disinfect the outer surface of the paper towel dispenser							
8	Clean and disinfect the room door handles							
9	Floors – mop with a neutral detergent							

THE PERSON WHO CLEANED MUST COMPLETED THE CHECKLIST EACH DAY

WITH THE EXCEPTION OF THE FLOORS USE THE CLINELL UNIVERSAL CLEANING AND DISINFECTING WIPES (GREEN CONTAINERS) UNLESS OTHERWISE INSTRUCTED BY INFECTION CONTROL



Florescent (invisible marker/pen) monitoring

**QUALITY IMPROVEMENT PROJECT
ENVIRONMENTAL CLEANING AND MONITORING FOR
INFECTION PREVENTION**

WARD - CLEANING AND DISINFECTION CHECKLIST

DATE:

ROOM OR BED NUMBER:

TICK THE BOX

ROUTINE CLEAN

ISOLATION CLEAN

TERMINAL CLEAN

	HIGH TOUCH ROOM SURFACES	WHERE TO MARK WITH INVISIBLE PEN	TICK WHEN MARKED ✓ OR N/A	WAS THE INVISIBLE PEN MARK REMOVED? Y OR N OR N/A
1	BED SIDE RAIL	LEFT SIDE WHERE NURSE AND PATIENT TOUCH		
2	BED SIDE RAIL	RIGHT SIDE WHERE NURSE AND PATIENT TOUCH		
3	OVERBED TABLE	KNOB TO RAISE OR LOWER THE TABLE		
4	WALL SUCTION	ON/OFF LEVER		
5	BACK OF BED PANEL	ABOVE THE TV REMOTE PLUG		
6	NURSE CALL BUZZER	WHERE THE NURSE OR PATIENT TOUCH		
7	TELEPHONE	PHONE HANDLE		
8	PATIENT CHAIR	LEFT ARM OF THE CHAIR		
9	PATIENT CHAIR	RIGHT ARM OF THE CHAIR		
10	BEDSIDE LOCKER	HANDLE OF THE TOP DRAWER		
11	ROOM SINK	TAP HANDLES		
11	DOOR HANDLE	INSIDE THE ROOM		
12	BATHROOM DOOR HANDLE	INSIDE THE BATHROOM		
13	BATHROOM TOILET HAND RAIL	HAND RAIL		
14	TOILET FLUSH BUTTON	BUTTON WHERE THE PATIENT OR NURSE TOUCHES		
15	TOILET PAPER DISPENSER	NEAR WHERE THE TOILET PAPER COMES OUT		
16	BED REMOTE	ON THE TOP SURFACE OF THE BED REMOTE		
17	PUMP	ON THE TOP SURFACE OF THE PUMP		
			NUMBER OF PEN MARKS	NUMBER OF MARKS REMOVED
			% RESULT	

**QUALITY IMPROVEMENT PROJECT
ENVIRONMENTAL CLEANING MONITORING FOR
INFECTION PREVENTION**

**BATHROOM/ENSUITE - CLEANING AND DISINFECTION
CHECKLIST NUMBER 1**

DATE:

ROOM OR BED NUMBER:

TICK THE BOX

ROUTINE CLEAN

ISOLATION CLEAN

DISCHARGE CLEAN

	HIGH TOUCH ROOM SURFACES	WHERE TO MARK WITH INVISIBLE PEN	TICK WHEN MARKED ✓ OR N/A	WAS THE INVISIBLE PEN MARK REMOVED? Y OR N OR N/A
1	LIGHT SWITCHES	WHERE NURSE OR PATIENT WILL TOUCH		
	DOOR HANDLE	INSIDE THE BATHROOM/ENSUITE DOOR		
2	HAND PAPER TOWEL DISPENSER	WHERE NURSE OR PATIENT WILL TOUCH		
3	HAND SOAP DISPENSER	ON THE OUTSIDE COVER		
4	TOILET PAPER DISPENSER	WHERE NURSE OR PATIENT WILL TOUCH		
5	SINK	ON THE FRONT EDGE OF THE SINK		
6	SINK TAPS	ON BOTH TAPS WHERE THE NURSE OR PATIENT WILL GRIP THE TAPS		
7	SINK SPLASHBACK	WHERE THE SINK IS JOINED TO THE SPLASHBACK AT THE REAR		
8	TOILET SEAT	WHERE THE NURSE OR PATIENT WILL TOUCH		
9	TOILET FLUSH BUTTON/HANDLE	BUTTON WHERE THE PATIENT OR NURSE WILL TOUCH		
10	UNDER TOILET SEAT-TOILET BOWEL	UNDER THE TOILET SEAT ON THE OUTER EDGE OF THE TOILET BOWL		
			NUMBER OF PEN MARKS	NUMBER OF MARKS REMOVED
			% PERCENTAGE RESULT	

Compliance with cleaning procedures & ranking against Victorian cleaning standards

Table 1
Results of UVM compared with visual auditing for November 2014

Site	UVM compliance for terminal cleaning and daily cleaning, %	Internal visual audit results, %
Hospital A	Terminal: 58 Daily: 20	97.5
Hospital B	Terminal: 65 Daily: 58	85.9
Hospital C	Terminal: 70 Daily: 38	97.4
Hospital D	Terminal: no discharges Daily: 65	95.2
Hospital E	Terminal: 90 Daily: no discharges	98

American Journal of Infection Control 43 (2015) 1347-9



ELSEVIER

Contents lists available at ScienceDirect

American Journal of Infection Control

journal homepage: www.ajicjournal.org



Practice forum

The role of ultraviolet marker assessments in demonstrating cleaning efficacy



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Key Words:
Cleaning
Environmental cleaning
Ultraviolet marker assessment

Cleaning standards measuring compliance using visual auditing alone can be misleading, because visually clean surfaces might not be cleaned of pathogens. An evidence-based system using both visual auditing and ultraviolet marker (UVM) assessments is recommended. Using a UVM system has enabled our health service to measure infection risk and implement actions to improve results. We recommend adopting a combined monitoring process using visual auditing with UVM audits to enhance cleaning and reduce the risk of health care-associated infection.

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Cleaning and disinfecting wipes

▶ Cleaning and disinfecting wipes

- ▶ Detergent/disinfectant surface wipes
- ▶ Can improve timeliness and thoroughness of room cleaning
- ▶ Makes spot cleaning of equipment and surfaces easy
- ▶ Improves consistency and delivery of correct concentrations of cleaning and disinfecting agents and
- ▶ Decrease usage of water and chemical agents
- ▶ Cleaning and disinfecting is one-step with disinfectant-detergent
- ▶ No pre-cleaning necessary unless spill or gross contamination
- ▶ **Wipe should have sufficient wetness to achieve the disinfectant contact time (e.g. >1 minute)**



Thank you

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Additional infection prevention and control resources

- ▶ Standardised Infection Control and Prevention Signs
- ▶ <https://www.safetyandquality.gov.au/our-work/healthcare-associated-infection/national-infection-control-guidelines/>
- ▶ 2016 Aged Care National Antimicrobial Prescribing Survey Report
- ▶ <https://irp-cdn.multiscreensite.com/d820f98f/files/uploaded/acNAPS2016.pdf>
- ▶ <https://www.ncas-australia.org/ncas-publications>
- ▶ 2017 summary of the aged care National Antimicrobial Prescribing Survey (acNAPS)
<https://www.doctorportal.com.au/mjainsight/2017/43/antimicrobials-in-aged-care-overused-and-underdocumented/>

Additional infection prevention and control resources

<https://www.safetyandquality.gov.au/our-work/healthcare-associated-infection/national-infection-control-guidelines/>

Visitors

See a nurse for information before entering the room

For all staff

Contact Precautions

in addition to Standard Precautions

Before entering room

- 1** Perform hand hygiene
- 2** Put on gown or apron
- 3** Put on gloves

On leaving room

- 1** Dispose of gloves
- 2** Perform hand hygiene
- 3** Dispose of gown or apron
- 4** Perform hand hygiene

Standard Precautions

And always follow these standard precautions

- Perform hand hygiene before and after every patient contact
- Use and dispose of sharps safely
- Follow respiratory hygiene and cough etiquette
- Use PPE when risk of body fluid exposure
- Perform routine environmental cleaning
- Use aseptic technique
- Clean and reprocess shared patient equipment
- Handle and dispose of waste and used linen safely

Visitors

See a nurse for information before entering the room

For all staff

Airborne Precautions

in addition to Standard Precautions

Before entering room

- 1** Perform hand hygiene
- 2** Put on N95 or P2 mask
- 3** Perform a fit check of the mask

On leaving room

- 1** Dispose of mask
- 2** Perform hand hygiene

Keep door closed at all times

Standard Precautions

And always follow these standard precautions

- Perform hand hygiene before and after every patient contact
- Use and dispose of sharps safely
- Follow respiratory hygiene and cough etiquette
- Use PPE when risk of body fluid exposure
- Perform routine environmental cleaning
- Use aseptic technique
- Clean and reprocess shared patient equipment
- Handle and dispose of waste and used linen safely

Additional infection prevention and control resources



Visitors

See a nurse for information before entering the room

For all staff

Droplet Precautions

in addition to Standard Precautions

Before entering room	On leaving room
 <p>1 Perform hand hygiene</p>	 <p>1 Dispose of mask</p>
 <p>2 Put on a surgical mask</p>	 <p>2 Perform hand hygiene</p>


Standard Precautions

And **always** follow these **standard precautions**

- Perform hand hygiene before and after every patient contact
- Use PPE when risk of body fluid exposure
- Use and dispose of sharps safely
- Perform routine environmental cleaning
- Clean and reprocess shared patient equipment
- Follow respiratory hygiene and cough etiquette
- Use aseptic technique
- Handle and dispose of waste and used linen safely

Standard Precautions

Always follow these **standard precautions**

 <p>Perform hand hygiene before and after every patient contact</p>	 <p>Clean and reprocess shared patient equipment</p>
 <p>Use personal protective equipment when risk of body fluid exposure</p>	 <p>Follow respiratory hygiene and cough etiquette</p>
 <p>Use and dispose of sharps safely</p>	 <p>Use aseptic technique</p>
 <p>Perform routine environmental cleaning</p>	 <p>Handle and dispose of waste and used linen safely</p>

Additional infection prevention and control resources



Droplet precautions

1. Put on a **SURGICAL MASK** before entering the room

Follow standard precautions at all times

1. Follow the **5 Moments of Hand Hygiene**
2. **Gloves** must be worn when touching blood, body fluids, secretions and excretions and contaminated items or surfaces
3. Wear a **gown or apron** during care activities where your clothing may come into contact with blood, body fluids, secretions and excretions

Thank you for your cooperation

SIGN 1

INFECTION CONTROL

DRAFT

Single room
Keep door closed
Dedicated equipment
Clean & disinfect equipment between each patient
Daily isolation clean

Gloves at all times for all healthcare workers

Wash or disinfect hands after leaving the room

Notify Infection Control