Hand Hygiene Policy

1. Background

The World Health Organization (WHO) Guidelines on Hand Hygiene in Health Care note that the transmission of health care-associated pathogens from one patient to another via Health Care Workers' (HCWs) hands requires five (5) sequential steps:

- Organisms are present on the patient's skin, or have been shed onto inanimate objects immediately surrounding the patient
- Organisms must be transferred to the hands of HCWs
- Organisms must be capable of surviving for at least several minutes on HCWs' hands
- Hand hygiene (HH) by the HCW must be inadequate or entirely omitted, or the agent used for HH inappropriate
- The contaminated hand/s of the caregiver must come into direct contact with another patient or with an inanimate object that will come into direct contact with the patient.

A WHO systematic literature review from 1980 – 2013 noted in studies where HH was used as the main intervention, and a significant improvement in HH compliance and/or increased alcohol-based hand rub (ABHR) consumption were achieved, a demonstrated substantial decrease of Methicillin resistant *Staphylococcus aureus* (MRSA) infections and/or colonisation rates were evident. However, to be successful, these interventions need to be multimodal and sustained over time in the context of an improved patient safety climate.

Hand decontamination is a simple and effective way in which HCWs can prevent the transmission of microorganisms between patients and themselves, and has been cited as the single most important strategy in preventing healthcare associated infections (HAIs).

2. Policy statement

The purpose of this policy is to mandate the expected standard for HH for WACHS HCWs in WACHS which include WACHS Hospitals, smaller Health centers, Nursing posts, Indigenous Health, Population Health, Community Health, Mental Health and Aged Care services.

The objective of this policy is to promote prevention and control of HAIs and improve patient safety, by endorsing the recommendations outlined in the WHO guidelines on HH in health care and the National Hand Hygiene Initiative (NHHI) Australian Commission on Safety and Quality in Healthcare – NHHI.

This Policy is a mandatory requirement under the Clinical Governance, Safety and Quality Policy Framework pursuant to section 26(2) (c) of the *Health Services Act 2016* (WA)
There may be exceptions to this policy for those with a disability e.g. the need to adapt clothing, or for religious reasons in conflict with this policy. Concerns should be discussed with the relevant line/department manager and guidance sought from Infection Prevention and Control (IPC) and Occupational Safety and Health (OSH).

3. Definitions

Alcohol-based hand rub (ABHR)	An alcohol-containing preparation (gel, foam or liquid) designed for reducing the number of viable microorganisms on dry, unsoiled hands.
Aseptic technique	Aseptic technique consists of a set of practices aimed at minimising contamination and is particularly used to protect the patient from infection during clinical procedures.
Clinical Area	An area in which examination, investigations, intervention, care, management and/or treatment of patients or clients is undertaken in a WACHS Health Service.
Clinical HCW	The medical, nursing, mental health, allied health and support services workforce who provide patient care.
Hand Hygiene (HH)	A general term applying to processes aiming to reduce the number of microorganisms on hands. This includes application of ABHR to the surface of dry unsoiled hands; or use of soap/solution (plain or antimicrobial) and running water (if hands are visibly soiled), followed by patting dry with single-use towels
Hand Hygiene Australia (HHA)	Hand Hygiene Australia is funded to implement the NHHI by the Australian Commission on Safety and Quality in Health Care (ACSQHC), as part of the HAI Program. HHA provide resources and services necessary for the implementation and sustainability of the NHHI and support the education of all Australian HCWs about the importance of HH in the prevention of HAIs.
Healthcare Associated Infection (HAI)	Healthcare-associated infections (HAIs) are those infections that are acquired as a direct or indirect result of healthcare.
Healthcare Worker (HCW)	Any person employed or contracted by WACHS, either on a permanent, temporary, casual, volunteer or agency basis to deliver or support healthcare services.
National Hand Hygiene Initiative (NHHI)	The NHHI is based on the WHO's Global Patient Safety Challenge 'Save Lives: Clean Your Hands' and the Hand Hygiene for all initiative, and adopts the '5 Moments for HH' framework.

Non-Clinical HCW	This includes all employees and volunteers who may enter patient areas, but do not provide care for patients. This may include those working in management, administration, education or research.
WA health system	Consists of the Department of Health, five Health Service Providers and Health Support Services. Each Health Service is responsible and accountable for the delivery of safe, high quality, efficient and economical Health Services to their local areas and communities.
WACHS	WA Country Health Service includes WACHS Hospitals, smaller Health Centers, Nursing posts, Indigenous Health, Population Health, Community Health, Mental Health and Aged Care services.

4. Roles and responsibilities

WACHS HCWs

Have a responsibility to ensure they comply with:

- HHAs 5 Moments for HH and the NHHI.
- The relevant Learning Framework requirements for HH
- The Dress Code applicable to their local sites.

Managers and Supervisors

Are responsible for monitoring and supporting HCWs to complete the relevant HH Learning Framework requirements for WA Country Health Services

Are to implement the NHHI and the HHA program as relevant to their size and acuity and to support credentialed and registered HH auditors where relevant, to maintain their validation training requirements.

Results of audits and other quality improvement activities should be disseminated to relevant key stakeholders to assist in facilitating improved HH compliance.

All Health Services should actively involve patients in their own care by providing relevant patient information and encouraging shared decision making.

Regional Infection Prevention and Control (IPC) Coordinators

Are responsible for developing a regional HH action plan incorporating all key stakeholders, and to support and advise relevant Health Services through their IPC program.

Are responsible for ensuring new HH products or proposed changes to HH products, are formally evaluated though a product evaluation committee with IPC and OSH input.

5. The 'Bare below the Elbows' principles

All Clinical HCWs working in a clinical area should ensure that:

- Bracelets, health monitoring devices, wrist watches and rings with stones or ridges are not worn on hands or lower forearm areas. A single flat ring/band may be worn but should not interfere with effective HH practices. WHO Guidelines on HH in Health Care note that consideration should be given to removal of all rings and other jewellery in high risk settings
- A medical alert necklace is preferred to a medical alert bracelet
- Short sleeves should be worn to allow for appropriate HH techniques to be practiced (NB: does not apply when utilising PPE)
- Fingernails should be kept short, clean and free of nail polish. Artificial nails are not to be worn in the clinical setting. Artificial nails refer to all signature nail systems, wraps and acrylic nails
- Lanyards, neckties, neck chains, scarves, glasses on chains etc. must be secured when providing clinical care to ensure the items do not have contact with the patient or the patient environment.[1]

6. Hand Hygiene practices

Five (5) 'Moments' for HH have been identified as the critical times when HH should be performed. A moment is where there is a perceived or actual risk of organism transmission from one surface to another via the hands of HCWs in patient or healthcare zones or spaces.[2]

These five (5) moments are:

- 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.

Other opportunities for HH include but are not limited to:

- Before and after removing Personal Protective Equipment (PPE), e.g. gloves, aprons, masks
- Before eating and handling food/drinks
- After blowing your nose or coughing/sneezing into a tissue
- After using a computer keyboard in clinical/patient areas
- After handling linen
- When performing maintenance duties in the facility
- Before and after preparing equipment in preparation for a procedure.

Effective HH relies on appropriate technique as much as on selection of the correct product. Inappropriate technique can lead to failure of HH measures to appropriately remove or kill microorganisms on hands, despite the superficial appearance of having complied with HH requirements.[1]

Refer to - HHA 5 Moments for Hand Hygiene Posters including posters for multiple settings e.g. Hospital, Paediatrics, Dental, Dialysis/Oncology, Ambulatory Care, Mother and Baby, Client instead of patient text and Pidgin English.

Key factors in effective HH techniques and maintaining skin integrity include:

- The duration of HH measures
- The exposure of all surfaces of hands and wrists to the preparation used
- The use of rubbing to create friction
- Ensuring that hands are completely dry.[1]

There are three (3) types of HH techniques:

Routine/Social (soap and water/ABHR)

The benefits of using soap on **visibly soiled** hands clearly outweigh any undesirable effects. Plain soap can loosen and remove transient flora. If visible soiling is not removed, the effect of any ABHR is minimised and effective HH is threatened.[1]
For guidance documents, please refer to the WHO and the HHA website:

- Hand washing - WHO How to Hand Wash Poster
- Use of ABHR - WHO How to Handrub Poster
- Handwash and ABHR Poster - WHO How to Handrub and How to Handwash

Aseptic/Clinical

ABHR is the HH product of choice for all standard aseptic technique procedures and is the gold standard of care for HH practice generally in Health Services settings, whereas hand washing is reserved for situations when the hands are visibly soiled, or when gloves have not been worn in the care of a patient with *Clostridium difficile* (*C. difficile*).[1] Refer to poster link above for how to perform HH with ABHR.

Surgical Hand antisepsis

Surgical hand antisepsis should aim to eliminate transient flora and significantly reduce resident flora at the beginning of a surgical procedure. It should also limit the re-growth and release of skin bacteria from the hands of the surgical team for the duration of the procedure in case an unnoticed puncture of the surgical glove allows the potential release of bacteria to the open wound.[5]

There are two (2) accepted methods of performing Surgical Hand antisepsis:

- **Surgical Hand Rubbing technique** using **Alcohol-based surgical hand rubs** (Refer to WHO poster for guidance, in conjunction with product manufacturer's instructions for use).
- **Surgical Hand Scrubbing Procedure** using a **registered anti-microbial agent** Refer to ACORN standards appendices for procedure guidelines.[7]

Current WHO guidelines recommend using alcohol-based formulations for pre-operative surgical hand antisepsis given its demonstrated superior antimicrobial efficacy and dermal tolerance compared to other methods.

HH and *C. difficile* and viruses such as Norovirus

It is suggested that HH is performed in the presence of known or suspected *C.difficile* and viruses such as Norovirus as follows:

- If gloves have not been worn, if gloves have been breached or if there is visible contamination of the hands despite glove use, use soap and water to facilitate the mechanical removal of spores. After washing, hands should be dried thoroughly with a single-use towel
- If gloves have been worn, a lower density of contamination of the hands would be expected and ABHR remains the agent of choice for HH.[1]

Repeated ABHR use

There is no maximum number of times that ABHR can be used before hands need to be washed with soap and water.[2]

7. HH practices in smaller Health Centres, Nursing Posts, Indigenous Health, Population Health, Community Health, Mental Health and Aged Care services

Although reports and scientific data are limited and many research questions remain unanswered, it is clear that hand and environmental contamination play a significant role in microbial transmission and determine the risk of infection in any Health Service setting.[6]

An increasing number of procedures are now performed in Outpatient or home-based settings, especially in high-risk patients (e.g. Dialysis and Oncologic patients). It is important also to consider the growing evidence of the circulation of multidrug-resistant microorganisms within the community.

The **patient zone** concept applies also in home care. In this setting, the patient zone corresponds to the patient's intact skin and clothes and the home environment, which is contaminated mainly by the patient's flora. Any transportation containers and care items brought by the HCWs represent the health-care area.

The **point of care** is where the procedure takes place. To help focus on HH when critically needed, the HCW should identify the point of care within the patient zone as the focus for HH and where it must be performed at 5 specific moments.[6]

For further information and practical examples of HH requirements and associated posters to display related to a broad range of outpatient care settings including, immunisation clinics, dental care, paediatric consultation, haemodialysis and health care in the home, refer to: WHO HH in Outpatient, Home-based Care and Long-term Care Facilities

ABHR and other medical equipment such as disposable gloves transported in cars, must be kept in portable 'coolers' and not left in the vehicle at the end of the day.[5]

8. Alcohol-based hand rub and Sterilisation Departments

The HHA Manual notes the following:

> AS/NZS 4187:2014 is the Australian standard for sterilisation departments. Section 5.6.12 of this standard notes that there should be sufficient HH facilities available and accessible in all work areas. The HH products for use can be ***either*** ABHRs or liquid soaps. Hand creams shall not be used when performing reprocessing activities.[2]

9. Glove Use

Gloves can protect patients and HCWs from exposure to infectious agents that may be carried on hands. As part of standard precautions single use gloves must be worn for contact with sterile sites, non-intact skin or mucous membranes, and for any activity that has been assessed as carrying a risk of exposure to blood, body substances, secretions and excretions.

HH products and gloves should be made available inside patient rooms, (including rooms utilised for transmission based precautions), to allow for appropriate HH to occur during the care of a patient. If performing multiple tasks whilst in the patient-care area for a patient under Transmission Based Precautions, apply the principles of Standard precautions and remove gloves, perform HH and apply clean gloves between tasks when required, to minimise risk of infection transmission.[2]

Wearing gloves does not replace the need for HH as gloves do not provide complete protection against hand contamination. Microorganisms may gain access to HCWs hands via small defects in gloves, or by contamination of the hands during glove removal. Inappropriate glove use often undermines efforts to sustain correct HH according to the 5 Moments and has been shown to increase the risk of transmission of HAIs.[2]

Glove use for extended periods of time should be avoided as moisture builds up and creates an environment for bacteria to multiply. Prolonged and indiscriminate use of gloves should be avoided as it may cause adverse reactions and skin sensitivity. Refer to WHO Glove Use Leaflet.

10. Product Placement

Critical to the success of the HH program is having ABHR readily available to HCWs in their work area and near the patient at the point of care. Dispensers act as a visual cue for HH behaviour, and their strategic and ample placement makes the product highly accessible for frequent use. Placement of ABHR needs to be consistent and reliable. Clinical HCWs should assist with the decision-making process, as they generally best understand the workflow in their area.[8]

The placement of dispensers next to sinks is strongly discouraged as this can cause confusion for some HCWs who may think they need to rinse their hands with water after using ABHR.

The following ABHR placement locations are suggested:

- The end of every patient bed (fixed or removable brackets).
- Affixed to mobile work trolleys (e.g. procedure or medication trolleys).
- High staff traffic areas (e.g. nurse's station, pan room, medication room and patient room entrance).
- Other multi-use patient-care areas, such as examination rooms, outpatient consultation rooms and child health or immunisation clinics.
- Entrances to wards/units, departments, Health centers, Nursing posts, and other Population Health and Community Health services.
- Public areas – e.g. waiting rooms, receptions areas, hospital foyers, near elevator doors in high traffic areas.
- Small personal bottles that HCWs carry with them may be more appropriate in some areas, such as home care settings.[8]

A clear decision needs to be made about whose responsibility it is to replace empty ABHR bottles. Workplace agreements or job descriptions may need to be changed to accommodate prompt replacement of ABHR bottles.[2]

ABHR should not be poured from one bottle into another as this may lead to contamination of the bottle and its contents, and may mix different production batches.[2]

ABHR approved for use should be registered as a pharmaceutical product with a batch number to enable tracking of the product, should it be required.[2]

When considering product placement, a 'Risk Assessment for Use of Alcohol-Based Hand Rubs in Healthcare Facilities' can be undertaken and a management plan put in place. This particularly applies to clinical areas managing patients with alcohol use disorder and patients at risk of deliberate self-harm. A generic ABHR Risk assessment form Hand Hygiene Australia-Product Placement, is available from the Safe ABHR Placement section.

11. HH Auditing requirements

HH compliance auditing is the established outcome measure for assessing the effectiveness of a HH program within the NHHI and is considered a valid and reliable measure within the acute care sector, in both public and private hospitals throughout Australia.[2]

Generally, the 5 Moments for HH audit tool is ideally suited to Health Services that have the greatest HCW/patient activity and interaction. This results in higher numbers of 'Moments' being audited in shorter time periods.

Compliance data for **relevant** Health Services must be submitted to HHA in accordance with their Guidelines for Data Submission to HHA Hospitals.[2]

Exemptions for compliance auditing in WA:

- The WA Health WA HH Program guidance issued in 2019 notes that the National Safety and Quality Health Service Standards (NSQHSS) require Health Services to have a HH program in place that is consistent with the current NHHI and jurisdictional requirements

- Small hospitals (less than 25 acute beds), Mental Health services, Outpatient care settings (e.g. School clinics, Immunisation clinics, Community midwifery centres) and Population health and Community health services are **exempt from the routine compliance auditing** component of the NHHI, as meaningful data is unlikely to be obtained

- However, the **remaining key elements of the program are required to be implemented** and HHA recommend the use of other program evaluation tools within these areas. These might include; staff HH knowledge surveys; HH technique audits; product placement/availability audits; and reports of Online Learning Package completion by staff. Tools are available on the HHA website under other audits.

- If the health service does choose to audit compliance, it is recommend that auditing is considered for areas where there is high activity and risk to patients (e.g. Electroconvulsive therapy centres, Immunisation clinics and treatment or procedure rooms).[9]

Rationale: HH Auditing in low risk settings results in a small number of 'Moments' being observed and resources required to undertake auditing may be better utilised measuring other aspects of a HH program e.g. product placement, education etc. In addition, when data is used for comparison, it is important to note that a higher number of 'Moments' audited will generate a more reliable compliance rate.[9]

12. Hand Care

Strategies for minimising occupational hand dermatitis include**:**

- Use of a HH product that contains skin emollient to minimise the risk of skin irritation and drying. Several studies have demonstrated that such products are tolerated better by HCWs and are associated with better skin condition when compared to plain or antimicrobial soap
- Use the HH and hand care products supplied by the Health Service regularly, e.g. at meal breaks and on completion of the shift to prevent dryness. The suite of products should be compatible and therefore less likely to cause irritation due to chemical interaction
- Educating staff on the correct use of HH products and on caring for their hands, including the regular use of skin moisturisers both at work and at home. Moisturising skin-care products should be compatible with ABHR.[2]

The preservative methylisothiazolinone is currently causing very high rates of Allergic Contact Dermatitis. All HCWs with contact dermatitis should check the ingredients of their own products and avoid it where possible. Methylisothiazolinone may be found in some liquid soaps, shampoos, sunscreens, hair products, moisturisers and disposable wipes (particularly baby wipes).[2]

HCWs with cuts or abrasions should cover any breaks in skin with a waterproof dressing (e.g. transparent occlusive dressing).

HCWs who are required to wear a splint whilst at work, must discuss further with their IPC Nurse and/or OSH to determine their ability to effectively perform HH in their work setting.

HCWs with concerns regarding the ability to cover cuts / abrasions appropriately and/or appear sensitive to HH products or gloves, must discuss further with their IPC Nurse and or OHS to determine their ability to effectively perform HH in their work setting. For staff with Dermatitis, refer to Appendix 1.

13. Patients and Visitors

It is important for both patients and visitors to perform HH appropriately. HCWs should instruct both patients and visitors about the importance of HH to assist in minimising cross transmission in all Health Service settings.[2]

HH facilities should be readily available and accessible for patients and visitors and assistance/education provided where necessary, including the use of instructional posters. Patients should be encouraged to perform HH prior to eating, after using the toilet/bedpan after sneezing, blowing their nose or coughing into hands, after touching/handling animals and on entering and leaving their room.[2]

HCWs should ensure patients have access to ABHR or a moistened, soapy washcloth and drying towel when access to a hand basin is not possible.

14. Cleaning shared patient equipment

Infectious agents can be widely found in the healthcare setting and there is a suggestion through outbreak investigations and case reports, that there is a link between an unclean healthcare environment and the transmission of infection.[1]

Transmission of infection may occur from the environment to the patient through direct contact with the environment or via the hand of HCWs, visitors or other staff members. It is therefore vitally important to maintain a clean environment to help prevent the spread of infection.[1]

Refer to the WACHS Environmental Cleaning Policy for further information.

15. Compliance

This policy is a mandatory requirement to meet NSQHS Preventing and Controlling Healthcare Associated Infection Standard – Infection prevention and control systems - Action 3.8

Mandatory training areas/compliance is reported on a monthly basis via the LMS Dashboard reports.

Acute care Health Services HH compliance data is available through the 'My Hospitals' website.

Missed moments during auditing are to be highlighted and education offered to the HCW by HH Auditors where possible, however, repeated observed non-compliance from an individual staff member should be reported to the individual's line manager and if required, managed through the Health Services' performance management processes.

Failure to comply with this policy may constitute a breach of the WA Health Code of Conduct (Code). The Code is part of the Employment Policy Framework issued in pursuant to section 26 of the *Health Services Act 2016* (WA) and is binding on all WACHS HCWs which for this purpose includes trainees, students, researchers, contractors for service (including visiting health professionals and agency staff) and persons delivering training or education within WACHS.

16. Records Management

Health Record Management Policy

17. Evaluation

Policy review is to be undertaken within a three year timeframe or sooner if evidence of decreased HH compliance through audit processes, or increased numbers of related poor outcomes such as HAIs.

18. Standards

National Safety and Quality Health Service Standards
Preventing and Controlling Healthcare Associated Infection Standard – Actions 3.1, 3.2, 3.3, 3.5, 3.6, 3.7, 3.8, 3.9 and 3.11

19. References

1. National Health and Medical Research Council Australian Guidelines for the Prevention and Control of Infection in Healthcare [Internet] Canberra; 2019 [Accessed: 2 September 2019]
2. Hand Hygiene Australia Hand Hygiene Australia Manual (5th edition): 5 Moments for Hand Hygiene [Internet] 2018 [Accessed: 2 September 2019]

3. Australian Commission on Safety and Quality in Health Care National Hand Hygiene Initiative [Internet] 2019 [Accessed: 2 September 2019]
4. World Health Organization The evidence for clean hands [Internet] 2019 [Accessed: 2 September 2019]
5. World Health Organization WHO guidelines on hand hygiene in health care [Internet] 2009 [Accessed: 2 September 2019]
6. World Health Organization Hand Hygiene in Outpatient and Home-based Care and Long-term Care Facilities [Internet] 2019 [Accessed: 2 September 2019]
7. Australian College of Perioperative Nurses Ltd (ACORN) Standards for Perioperative Nursing in Australia. 15th ed. Adelaide, South Australia: ACORN; 2018
8. Hand Hygiene Australia Product Placement [Internet] 2019 [Accessed: 2 September 2019]
9. WA Hand Hygiene Program Guidelines [Internet] 2019 [Accessed: 2 September 2019]

20. Related WACHS Policy Documents

Consumer and Carer Engagement Policy
Environmental Cleaning Policy
Infection Prevention and Control Policy
Occupational Safety and Health Policy

21. Policy Framework

Clinical Governance, Safety and Quality

22. Appendix

Appendix 1: Staff with Dermatitis

This document can be made available in alternative formats on request for a person with a disability

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Version:	1.01	**Date Published:**	25 May 2023

Appendix 1: Staff with Dermatitis

HCWs who appear sensitive to HH products or gloves must discuss further with their IPC Nurse and or OSH to determine their ability to effectively perform HH in their work setting. All complaints should be taken seriously and a review process instigated.

There are 3 main types of contact dermatitis:

- irritant contact dermatitis (ICD),
- allergic contact dermatitis (ACD), and
- Contact urticaria.[2]

ABHR produces the lowest incidence of ICD of all the HH products currently available. True allergy to ABHR is rare and allergy to alcohol alone has not been reported to date.

Intact skin is a first line defence mechanism against infection. Damaged skin can not only lead to infection in the host, but can also harbour higher numbers of microorganisms than intact skin and hence increase the risk of transmission to others. HHA note that damaged skin on HCWs is an important issue and needs to be seriously addressed.

Factors that may contribute to dermatitis include:

- Fragrances and preservatives. Commonly the cause of contact allergies, these should be kept to a minimum or eliminated when selecting an ABHR
- Washing hands regularly with soap and water immediately before or after using an ABHR is not only unnecessary, but may lead to dermatitis
- Donning gloves while hands are still wet from either hand washing or applying ABHR increases the risk of skin irritation
- Using hot water for hand washing
- Failure to use supplementary moisturisers
- Quality of paper towels.[2]

All Health Services should have a process that will facilitate access to referral for follow up as outlined by HHA that may include an Occupational Dermatologist, local Doctor, or emergency department for HCWs with persistent skin problems.[2]