



IPAC CANADA PRACTICE RECOMMENDATIONS

Hand Hygiene in Health Care Settings

“Adherence to hand hygiene recommendations is the single most important practice for preventing the transmission of microorganism in health care and directly contributes to patient safety”.⁽¹⁾ Professional, federal, provincial and territorial occupational health and safety recommendations, as well as regulations and legislation regarding hand hygiene, should be followed.⁽¹⁾

DEVELOPED BY:

**IPAC Canada’s
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Guiding Principles:

- Effective hand hygiene must be an individual and an institutional priority. *“A multifaceted, multidisciplinary hand hygiene program must be implemented in all health care settings.”*^(2,3,4) Barriers to performing hand hygiene must be addressed.
- Hand hygiene may be performed either by using soap and running water, or with alcohol-based hand rubs (ABHR).^(1,2,3,5) ABHR hand rubs/gels/rinses are the preferred method of hand hygiene unless hands are visibly soiled.^(2,6) If visibly soiled, wash hands with soap and warm, running water.
- Careful selection of products used for hand hygiene practice (e.g., ABHR, soaps, lotions, paper towels) has a positive impact on hand hygiene compliance.⁽²⁾
- Assessment of workflow and correct placement of products increases hand hygiene compliance. Whenever possible, provide products at point-of-care.
- Health care settings must develop a proactive skin care program to keeping hands healthy and to support optimal hand hygiene.
- Effective hand hygiene education programs are ongoing and include indications for hand hygiene, factors that influence hand hygiene, hand hygiene agents, hand hygiene techniques, hand care to promote skin integrity, as well as human factors in relation to the environment.⁽⁷⁾
- The use of champions or role models has been shown to improve hand hygiene practices.
- Fire regulations for ABHR must be adhered to.
- Patient¹ engagement in the program should be included.
- Audits of hand hygiene adherence with feedback lead to improved hand hygiene compliance.

¹ Note: In this document, patient refers to client/patient/resident

Infection Prevention and Control Practice Recommendations for Hand Hygiene in Health Care Settings

1. Alcohol-based hand rubs (ABHR)/gels/rinses

- Ensure hands are visibly clean. Apply an adequate amount of ABHR, continuously rubbing all surfaces of hands until dry (approximately 15-20 seconds). Use ABHR with alcohol concentrations above 60% and up to 90%⁽¹⁾, depending on formulation.^(8,9,10,11)
- If the alcohol concentration is around 60%, the unit of measure should be weight/weight and if the alcohol concentration is around 80% the unit of measure should be volume/volume to avoid concentrations that are sub-optimal. Check with the manufacturer.⁽¹²⁾
- Provide ABHR at point-of-care so it is easily accessible for appropriate use. Complete an organizational risk assessment to determine the most appropriate placement of ABHR in every facility. Locked, tamper-proof containers should be used.
- ABHR is preferred to antimicrobial soap in critical care settings such as intensive care and burn units and before performing aseptic procedures, because the antimicrobial activity is superior.^(1,2)
- **Current studies show that non-alcohol-based waterless antiseptic agents are less effective than ABHRs and therefore are not recommended and should not be used for hand hygiene in health care settings.**^(1,2,11)

2. Hand washing with soap and water

- If hands are visibly soiled, wet hands with warm running water before applying soap. Vigorously lather all surfaces of the hands with soap and warm running water for 15-20 seconds. Rinse and dry hands thoroughly. To avoid recontamination of the hands, use no touch technique (e.g., turn off taps with a paper towel).
- To prevent contamination of container and product, use soap containers until empty and then discard. Do not top up containers.
- Routine use of antimicrobial soap for hand hygiene is not necessary and not recommended if ABHR is available.⁽¹⁾
- Do not use bar soap for hand hygiene except for individual patient use.

3. Surgical hand preparation:

In an operative setting, an antimicrobial product with residual antimicrobial activity should be used. The antimicrobial activity of ABHRs is superior to that of all other currently available methods of preoperative surgical hand preparation, and is preferred.⁽²⁾

4. Other considerations:

- Wear short-sleeved clothing or push/roll up sleeves to prevent them from getting wet.
- Avoid hand and wrist jewellery. Rings have been shown to increase the number of microorganisms on hands⁽¹³⁾ and increase the risk of tears in gloves. Their use while providing care is discouraged.^(2,3)
- Keep fingernails short and clean.
- Direct care providers should not wear nail polish including shellac. Studies have shown that chipped nail polish or nail polish worn longer than four days can harbour microorganisms that

are not removed by hand washing, even with surgical hand scrubs⁽²⁾ and effective monitoring is a challenge.

- If you are a health care worker (HCW) providing patient care, do not wear artificial nails or nail enhancements/nail art, including but not limited to acrylic gel nails and wraps. These have been associated with increased glove tears, transfer of microorganisms, and outbreaks of infection.⁽²⁾

5. Skin care

Provide hand lotions or creams to minimize any skin irritation or breakdown associated with hand hygiene.

To be effective, skin care products must be used regularly. Health care facilities should develop a proactive program to keep hands healthy so hand hygiene can be optimal. Engaging HCWs and Occupational Health experts in design of a program has been shown to increase its effectiveness.

⁽⁴⁾ Key components of a skin care program include:

- Provide efficacious skin care products and barrier creams that do not interfere with the persistent antimicrobial effect of the hand hygiene agent being used.
- Use products that do not have adverse effects on gloves.
- Position skin care products as close as possible to areas where hand hygiene is performed.
- Use dispensers of sufficient quality that they will not clog or leak.
- Use dispensers that can be easily flagged for disposal when empty.
- Place dispensers to minimize splashing or dripping onto adjacent wall and floor surfaces.
- Use warm but not hot water for hand washing.

6. Indications for when to perform hand hygiene in healthcare settings

Follow the “4 Moments for hand hygiene” for training and auditing purposes in all health care settings:

- Before initial patient/patient environment contact
- Before aseptic procedure
- After body fluid exposure risk
- After patient/patient environment contact

Also clean hands:

- Before putting on gloves
- Before clean procedures such as preparing, handling, or serving food or medications to a patient.
- After risk of contact with blood, body fluids, secretions and excretions of patient, even if gloves are worn.
- Immediately after removing gloves, before moving to another activity, including when moving from a contaminated body site to a clean body site during care delivery.
- After performing personal functions such as blowing your nose or using the toilet.

- Any time hands are visibly soiled.
- Whenever in doubt.

7. After caring for a patient with *Clostridium difficile* infection (CDI)

As alcohol does not kill spores, soap and water are theoretically more effective at removing spores than ABHR. However, HCWs use gloves when providing personal care to patients with diarrhea, and Contact Precautions for patients with CDI. Gloves reduce the risk of hand contamination and have been shown to reduce the risk of transmission of CDI^(1,14).

- Wash hands with soap and water after glove removal if a dedicated staff hand washing sink is immediately available.
- Hand hygiene should not be carried out at a patient sink, as this will re-contaminate the HCW's hands. Hands should be cleaned using ABHR after glove removal, if a dedicated staff hand washing sink is not immediately available.
- Observe meticulous hand hygiene with either alcohol-based hand rub (ABHR) or soap and water.
- Provide education to the patient and visitors on the need and procedure to be used for hand hygiene. Patients who are unable to perform hand hygiene independently should be assisted by the HCW.

8. Risk of fire related use of ABHR

- Care should be taken to ensure hands are completely dry after use of ABHR, for the ABHR to be effective before touching the patient /environment and to eliminate the “*extremely rare risk of flammability in the presence of an oxygen-enriched environment or static electricity from carpeting*”.^(2,15)
- Adhere to local fire regulations.

9. Education

Educate, motivate, monitor, and reinforce. .^(1,2,3,4,5) Effective hand hygiene education programs should be ongoing and include:

- the indications of when to clean hands
- the effective methods to clean hands and
- how to maintain healthy hands.

10. Audits

Measure hand hygiene adherence and provide feedback to improve performance.^(1,2,3,4)

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Hand Hygiene Resources

Visit IPAC Canada's Hand Hygiene Resources web page. Available at: http://www.ipac-canada.org/links_handhygiene.php.

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