

Nursing: Infection Prevention and Control

Seven Things Nurses and Patients Should Question

by
Canadian Nurses Association
Infection Prevention and Control Canada
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1 **Don't do a urine dip or send urine specimens for culture unless urinary tract symptoms are present.**

Don't do a urine dip or send urine specimens for culture when patients/clients/residents (including the elderly or persons with diabetes) do not have urinary tract symptoms or when following up to confirm effective treatment. Testing should only be done when there are urinary tract infection (UTI) symptoms such as urinary discomfort, frequency, urgency, supra-pubic pain, flank pain or fever. Dark, cloudy and/or foul-smelling urine may not be suggestive of UTI but rather of inadequate fluid intake. Delirium by itself is not considered a symptom of cystitis in non-catheterized patients. Testing often shows bacteria in the urine, with as many as 50% of those tested showing bacteria without localizing symptoms to the genitourinary tract. Over-testing and treating asymptomatic bacteriuria with antibiotics lead to an increased risk of diarrhea and infection with *Clostridium difficile*. Overuse of antibiotics contributes to increasing antimicrobial resistance. The only exceptions to such overuse are screening in early pregnancy, for which there are clear guidelines, and screening for asymptomatic bacteriuria before urologic procedures in which mucosal bleeding is anticipated.

2 **Don't recommend antibiotics for infections that are likely viral in origin, such as an influenza-like illness.**

Since the vast majority of upper respiratory infections are viral, antibiotics are rarely indicated and may lead to adverse effects. Overuse or misuse of antibiotics can lead to increased antibiotic resistance in the individual and the larger society. Antiviral drugs are authorized for influenza treatment and prophylaxis in Canada. Their use will depend on a number of factors such as patient risk, relevant history and the duration and severity of symptoms. If a nurse caring for a patient feels that medication is not the appropriate intervention, the nurse has a responsibility to discuss these concerns with the prescribers.

3 **Don't overuse gloves.**

Gloves should only be worn: (1) when a point-of-care risk assessment indicates a risk of contact with broken skin, blood or body fluids, mucous membranes or contaminated surfaces (as per routine practices); (2) for situations where additional (contact) precautions are indicated; or (3) for contact with chemicals (e.g., during environmental cleaning, preparing chemotherapy, etc.). When a task requires gloves, they should be put on immediately beforehand and removed immediately after, at which point hands should be cleaned. Gloves are not necessary for social touch (e.g., shaking hands) or when contact is limited to intact skin (e.g., taking blood pressure, dressing a client) or clean surfaces. Don't wear multiple layers of gloves and don't substitute gloves for hand hygiene. Hand hygiene is the single most important way to prevent transmission of infection, and alcohol-based hand rub (ABHR) is the preferred method. If gloves must be worn, after cleaning hands, allow them to dry before putting on gloves to reduce the risk of chronic irritant contact dermatitis (ICD) and colonization of hands. If hands are not visibly soiled, this risk could be reduced by avoiding handwashing and using ABHR instead.*

4 **Don't send unnecessary or improperly collected specimens for testing.**

Don't routinely send specimens for testing or screening (e.g., for methicillin-resistant *Staphylococcus aureus* [MRSA]) unless clinical evidence of infection is present (e.g., for incisions or eyes). If the highest quality specimen that can be obtained is through a swab of infected skin, tissue or wound, cleanse the area with sterile saline beforehand to reduce surface contaminants. Do not take a specimen of the discharge unless it is specifically ordered. Improperly collected or poor-quality specimens (including swabs) can reduce patient safety by prompting antimicrobial therapy (in cases of colonization) and increase laboratory and pharmacy expenses. To promote sensible antimicrobial use and optimize the treatment of infected patients, while reducing unnecessary microbiology lab workup, attention should be paid to appropriate specimen collection.

5 Don't collect stool that is not diarrhea for *Clostridioides difficile* infection testing or test of cure.

Don't routinely collect or process specimens for *Clostridioides* (formerly *Clostridium*) *difficile* testing when stool is not diarrhea (i.e., does not take the shape of the specimen container), the patient has had a prior nucleic acid amplification test result within the past seven days (e.g., polymerase chain reaction) or as a test of cure. A positive test in the absence of diarrhea likely represents *C. difficile* colonization. Repeated *C. difficile* testing within seven days of a negative test generally adds little diagnostic value. A test of cure in patients with recent *C. difficile* infection is also not recommended, as colonization may continue indefinitely. Contact precautions are required until symptoms (i.e., diarrhea) resolve.

6 Don't prolong the use of invasive devices.

Invasive devices (such as central venous catheters and endotracheal tubes) should not be used without specific indication (determined by appropriate clinical assessment) and should not be left in place without daily re-assessment. If required, invasive devices should not be used longer than necessary, as they breach skin and body integrity and are portals of entry for infection.

7 Don't shave hair for medical procedures. Use clippers if hair removal is required.

Shaving hair (e.g., preoperatively, for vascular access device insertion or electrode application) can result in microscopic cuts and abrasions to the underlying skin surface. According to World Health Organization guidelines, hair should not be removed unless it interferes with a surgical procedure. The use of razors (shaving) prior to surgery increases incidents of wound infection when compared to clipping, depilatory use or the non-removal of hair. If hair must be removed, clipper use is sufficient for any body part (razor use is not appropriate for any operative site). Clippers should be used as close to the time of surgery as possible. To facilitate better contact for electrodes or vascular access device dressings, disposable (or cleaned and disinfected reusable-head) surgical clippers should be used.

How the list was created

The Canadian Nurses Association (CNA) and Infection Prevention and Control (IPAC) Canada established its Choosing Wisely Canada nursing list by convening an eight-member nursing working group (NWG). The group consisted of infection prevention and control nursing experts from across Canada, representing a broad range of geographical regions and practice settings. The NWG began considering its list by reviewing existing recommendations, including items from Choosing Wisely Canada's specialty societies and the American Academy of Nursing (AAN) Choosing Wisely list, both of which had already undergone rigorous evidence reviews. In addition, members brought forward recommendations on new evidence-based items. The NWG appraised 298 items for their relevance to nursing using a structured process developed for this work. Each of these items (217 from Choosing Wisely Canada, 15 from AAN Choosing Wisely and 66 that were independently submitted) was appraised by two independent reviewers then validated by the group. Using a modified Delphi process for the next two rounds of revision, the group refined and adapted 30 items until it reached consensus on a final seven-item list. A literature review was conducted to confirm the evidence for these items, and supporting nursing research was added where appropriate. The list subsequently underwent extensive consultation, with input from nursing experts in patient safety, members of the Canadian Network of Nursing Specialties, patient advocates, CNA jurisdictional members, CNA nurses, the Canadian Association for Drugs and Technologies in Health (CADTH) and Choosing Wisely Canada's internal clinician reviewers. In September 2017, the Choosing Wisely Canada nursing list was presented to the IPAC Canada and CNA boards, who gave it their full endorsement and support.

Sources

- 1** American College of Obstetricians and Gynecologists. ACOG Practice Bulletin; No. 91: Treatment of urinary tract infections in nonpregnant women. *Obstet Gynecol.* 2008 Mar;111(3):785-94. PMID: [18310389](#).
[Anti-Infective Guidelines for Community-Acquired Infections](#). 14th Edition [Internet]. Toronto (ON): MUMS Guideline Clearinghouse; 2019 [cited 2019 Jul 25].
Choosing Wisely Canada. [Association of Medical Microbiology and Infectious Diseases Canada: Five things physicians and patients should questions](#) [Internet]. 2017 Jun [cited 2017 Sep 25].
Choosing Wisely Canada. [Long Term Care Medical Directors Association of Canada: Six things physicians and patients should questions](#) [Internet]. 2017 Jan 8 [cited 2017 Sep 25].
Juthani-Mehta, M. Asymptomatic bacteriuria and urinary tract infection in older adults *Clin Geriatr Med.* 2007 Aug;23(3):585-94. vii. PMID: [17631235](#).
Happe J, et al. [Surveillance definitions of infections in Canadian long term care facilities](#). Infection Prevention and Control Canada (IPAC Canada). *Can J Infect Control.* Fall 2017 (Suppl):10-17 [cited 2109 Jul 25].
High KP, et al. Clinical practice guideline for the evaluation of fever and infection in older adult residents of long-term care facilities: 2008 update by the Infectious Diseases Society of America. *Clin Infect Dis.* 2009 Jan 15;48(2):149-71. PMID: [19072244](#).
Nicolle LE, et al. [Clinical practice guideline for the management of asymptomatic bacteriuria: 2019 update by the Infectious Diseases Society of America](#). [Internet]. 2019 [cited 2109 Jul 25].
Sloane PD, et al. Urine culture testing in community nursing homes: Gateway to antibiotic overprescribing. *Infect Control Hosp Epidemiol.* 2017 May;38(5):524-531. PMID: [28137327](#).
Stone ND, et al. Surveillance definitions of infections in long-term care facilities: revisiting the McGeer criteria. *Infect Control Hosp Epidemiol.* 2012 Oct;33(10):965-77. PMID: [22961014](#).
Zabarsky TF, et al. Sustained reduction in inappropriate treatment of asymptomatic bacteriuria in a long-term care facility through an educational intervention. *Am J Infect Control.* 2008 Sep;36(7):476-80. PMID: [18786450](#).
- 2** Choosing Wisely Canada. [College of Family Physicians of Canada: Thirteen things physicians and patients should question](#) [Internet]. 2019 Jul [cited 2019 Jul 25].
Government of Canada. [Information for health professionals: Flu \(Influenza\)](#) [Internet]. 2018 Oct 25 [cited 2019 Jul 25].
Hirschmann JV. Antibiotics for common respiratory tract infections in adults. *Arch Intern Med.* 2002 Feb 11;162(3):256-64. PMID: [11822917](#).
Low D. Reducing antibiotic use in influenza: Challenges and rewards. *Clin Microbiol Infect.* 2008 Apr;14(4):298-306. PMID: [18093237](#).
Schumann SA, et al. Patients insist on antibiotics for sinusitis? Here is a good reason to say "no". *J Fam Pract.* 2008 Jul;57(7):464-8. PMID: [18625169](#).
Smith SR, et al. Treatment of mild to moderate sinusitis. *Arch Intern Med.* 2012 Mar 26;172(6):510-3. PMID: [22450938](#).
World Health Organization. [The evolving threat of antimicrobial resistance: Options for action](#) [Internet]. 2012 [cited 2017 Sep 25].
- 3** * "An alcohol-based hand rub (ABHR) is the preferred method of hand hygiene in healthcare settings, unless exceptions apply (i.e., when hands are visibly soiled with organic material, if exposure to norovirus and potential spore-forming pathogens such as *Clostridium difficile* is strongly suspected or proven, including outbreaks involving these organisms)". Public Health Agency of Canada. [Hand hygiene practices in healthcare settings](#) [Internet]. 2012 [cited 2017 Sep 25].
Boyce JM, et al. Guideline for Hand Hygiene in Health-Care Settings: recommendations of the Healthcare Infection Control Practices Advisory Committee and the HICPAC/SHEA/APIC/IDSA Hand Hygiene Task Force. *Infect Control Hosp Epidemiol.* 2002 Dec;23(12 Suppl):S3-40. PMID: [12515399](#).
Canadian Agency for Drugs & Technologies in Health. [Hand antisepsis procedures: a review of the guidelines](#) [Internet]. 2017 Mar 9 [cited 2017 Sep 25].
Cashman MW, et al. Contact dermatitis in the United States: Epidemiology, economic impact, and workplace prevention. *Dermatol Clin.* 2012 Jan;30(1):87-98. viii. PMID: [22117870](#).
Conly JM. Personal protective equipment for preventing respiratory infections: what have we really learned? *CMAJ.* 2006 Aug 1;175(3):263. PMID: [16880447](#).
Fuller C, et al. "The dirty hand in the latex glove": a study of hand hygiene compliance when gloves are worn. *Infect Control Hosp Epidemiol.* 2011 Dec;32(12):1194-9. PMID: [22080658](#).
Korniewicz DM, et al. Barrier protection with examination gloves: Double versus single. *Am J Infect Control.* 1994 Feb;22(1):12-5. PMID: [8172370](#).
Marimuthu K, et al. The effect of improved hand hygiene on nosocomial MRSA control. *Antimicrob Resist Infect Control.* 2014 Nov 26;3:34. PMID: [25937922](#).
Pittet D, et al. The World Health Organization guidelines on hand hygiene in health care and their consensus recommendations. *Infect Control Hosp Epidemiol.* 2009 Jul;30(7):611-22. PMID: [19508124](#).
Provincial Infectious Diseases Advisory Committee (PIDAC). [Routine Practices and Additional Precautions In All Health Care Settings, 3rd edition](#) [Internet]. 2012 Nov [cited 2017 Sep 25].
Provincial Infectious Diseases Advisory Committee (PIDAC). [Best Practices for Hand Hygiene in All Health Care Settings, 4th edition](#) [Internet]. 2014 Apr [cited 2017 Sep 25].
Public Health Agency of Canada. [Routine Practices and Additional Precautions for the Prevention of Transmission of Infection In Health Care Settings](#) [Internet]. 2012 [cited 2017 Sep 25].
Smedley J, et al. Management of occupational dermatitis in healthcare workers: a systematic review. *Occup Environ Med.* 2012 Apr;69(4):276-9. PMID: [22034544](#).

- 4 Avdic E, et al. The role of the microbiology laboratory in antimicrobial stewardship programs. *Infect Dis Clin North Am*. 2014 Jun;28(2):215-35. PMID: [24857389](#).
 Bonham P. Swab cultures for diagnosing wound infections: a literature review and clinical guideline. *J Wound Ostomy Continence Nurs*. 2009 Jul-Aug;36(4):389-95. PMID: [19609159](#).
 MacVane SH, et al. The Role of Antimicrobial Stewardship in the Clinical Microbiology Laboratory: Stepping Up to the Plate. *Open Forum Infect Dis*. 2016 Sep 21;3(4):ofw201. PMID: [27975076](#).
 Miller JM. Poorly Collected Specimens May Have a Negative Impact on Your Antibiotic Stewardship Program. *Clinical Microbiology Newsletter*. 2016 Mar 15;38(6);43-8.
 Morency-Potvin P, et al. Antimicrobial Stewardship: How the Microbiology Laboratory Can Right the Ship. *Clin Microbiol Rev*. 2016 Dec 14;30(1):381-407. PMID: [27974411](#).
 Registered Nurses' Association of Ontario. [Assessment and Management of Pressure Injuries for the Interprofessional Team, Third Edition](#) [Internet]. 2016 [cited 2017 Nov 1].
- 5 Aichinger E, et al. Nonutility of repeat laboratory testing for detection of *Clostridium difficile* by use of PCR or enzyme immunoassay. *J Clin Microbiol*. 2008 Nov;46(11):3795-7. PMID: [18784320](#).
 Choosing Wisely Canada. [Association of Medical Microbiology and Infectious Diseases Canada: Five things physicians and patients should ask questions](#) [Internet]. 2017 Jun [cited 2017 Sep 25].
 Luo RF, et al. Is repeat PCR needed for diagnosis of *Clostridium difficile* infection? *J Clin Microbiol*. 2010 Oct;48(10):3738-41. PMID: [20686078](#).
 Luo RF, et al. Alerting physicians during electronic order entry effectively reduces unnecessary repeat PCR testing for *Clostridium difficile*. *J Clin Microbiol*. 2013 Nov;51(11):3872-4. PMID: [23985918](#).
 Public Health Agency of Canada. [Clostridium Difficile Infection: Infection Prevention and Control Guidance for Management in Acute Care Settings](#) [Internet]. 2013 Jan 11 [cited 2017 Sep 25].
- 6 Association for Professionals in Infection Control and Epidemiology. [APIC implementation guide: Guide to preventing central line-associated infections](#) [Internet]. 2015 Dec [cited 2017 Sep 25].
 Canadian Patient Safety Institute. [Central Line-Associated Bloodstream Infection \(CLABSI\): Getting Started Kit](#) [Internet]. 2012 Jun [cited 2017 Sep 25].
 Canadian Patient Safety Institute. [Ventilator-Associated Pneumonia Infection \(VAP\): Getting Started Kit](#) [Internet]. 2012 Jun [cited 2019 Jul 25].
 Centers for Disease Control and Prevention. [Guidelines for the Prevention of Intravascular Catheter-Related Infections, 2011](#) [Internet]. 2011 [cited 2017 Sep 25].
 Klompas M, et al. Strategies to prevent ventilator-associated pneumonia in acute care hospitals: 2014 update. *Infect Control Hosp Epidemiol*. 2014 Aug;35(8):915-36. PMID: [25026607](#).
 Marschall J, et al. Strategies to prevent central line-associated bloodstream infections in acute care hospitals: 2014 update. *Infect Control Hosp Epidemiol*. 2014 Jul;35(7):753-71. PMID: [24915204](#).
- 7 Allegranzi B, et al. New WHO Recommendations on Perioperative Measures for Surgical Site Infection Prevention: An Evidence-based Global Perspective. *Lancet*. 2016;16(12): 276-87. PMID: [27816413](#).
 Anderson DJ, et al. Strategies to prevent surgical site infections in acute care hospitals: 2014 update. *Infect Control Hosp Epidemiol*. 2014 Jun;35(6):605-27. PMID: [24799638](#).
 Association of periOperative Registered Nurses. [Guidelines for Perioperative Practice](#) [Internet]. 2017 [cited 2017 Sep 25].
 Broekman ML. Neurosurgery and shaving: what's the evidence? *J Neurosurg*. 2011 Oct;115(4):670-8. PMID: [21721875](#).
 Canadian Patient Safety Institute. [Surgical site infection](#) [Internet]. 2016 [cited 2017 Sep 25].
 Infusion Nurses Society. [Infusion therapy standards of practice \(standard 33\)](#) [Internet]. 2016 [cited 2017 Sep 27].
 Operating Room Nurses Association of Canada. [The ORNAC Standards, Guidelines, and Position Statements for Perioperative Registered Nursing Practice, 13th edition](#) [Internet]. 2017 [cited 2019 Jul 25].

About the Canadian Nurses Association

CNA represents registered nurses from ten provincial and territorial nursing associations and colleges, independent registered nurse members from Ontario and Quebec and retired registered nurses from across the country. CNA advances the practice and profession of nursing to improve health outcomes and strengthen Canada's publicly funded, not-for-profit health system.



About Infection Prevention and Control Canada

IPAC Canada is a multidisciplinary, professional organization for those engaged in the prevention and control of infections. IPAC Canada was incorporated under the Canadian Corporation Act in 1976 and is a registered non-profit organization. IPAC Canada has over 1600 members.



About Choosing Wisely Canada

Choosing Wisely Canada is a campaign to help physicians and patients engage in conversations about unnecessary tests, treatments and procedures, and to help physicians and patients make smart and effective choices to ensure high-quality care.

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