Choosing Wisely Canada™
In partnership with the Canadian Medical Association

AMMI™ Canada

Five Things Physicians and Patients Should Question

1 Don't routinely prescribe intravenous forms of highly bioavailable antimicrobial agents for patients who can reliably take and absorb oral medications.

Antimicrobials such as fluoroquinolones, trimethoprim-sulfamethoxazole, clindamycin, linezolid, metronidazole and fluconazole have excellent bioavailability and only rarely need to be administered intravenously. Use of oral formulations of these medications reduces the need for placement and maintenance of venous access devices and their associated complications.

2 Don't prescribe alternate second-line antimicrobials to patients reporting non-severe reactions to penicillin when beta-lactams are the recommended first-line therapy.

Reported penicillin reactions frequently result in the use of alternate second-line agents that may be clinically inferior or may pose increased risks to patients resulting in longer lengths of stay and increased costs of care. Alternate broad-spectrum agents may also result in increased rates of adverse events and selection for antimicrobial resistance. Therefore, it is important to obtain a detailed history of a patient's reported prior reaction to penicillin to determine whether beta-lactam therapy can be safely administered.

3 Don't routinely repeat CD4 measurements in patients with HIV infection with HIV-1 RNA suppression for >2 years and CD4 counts >500/μL, unless virologic failure occurs or intercurrent opportunistic infection develops.

The 2014 recommendations of the International Antiviral Society – US Panel state that measurement of CD4 count is optional among patients with suppressed viral loads for >2 years and CD4 counts >500/μL. CD4 measurement in these patients is of low-value and may create unnecessary patient concern in response to normal variation of CD4 counts. In prospective studies of patients who have responded to antiretroviral therapy with HIV-1 RNA suppression and rises in CD4 cell count >200 cells/μL, there was little clinical benefit from continued routine measurement of CD4 counts.

4 Don't routinely repeat radiologic imaging in patients with osteomyelitis demonstrating clinical improvement following adequate antimicrobial therapy.

There is poor correlation between clinical response and resolution of findings on magnetic resonance imaging (MRI), computed tomography (CT), and nuclear studies in patients with osteomyelitis. Because radiologic resolution may lag behind clinical improvement, repeat imaging may lead to unnecessary prolongation of antimicrobial therapy. Repeat imaging is indicated in cases where there is a lack of clinical response, progression of clinical findings, or the presence of an undrained abscess on the initial scan.

5 Don't prescribe aminoglycosides for synergy to patients with bacteremia or native valve infective endocarditis caused by *Staphylococcus aureus*.

The addition of an aminoglycoside such as gentamicin to beta-lactam therapy or vancomycin for treatment of bacteremia or native valve infective endocarditis caused by *Staphylococcus aureus* has not been demonstrated to improve clinical outcomes. This practice may result in adverse effects including acute kidney injury and ototoxicity. The addition of gentamicin is still recommended in cases of prosthetic valve endocarditis caused by *Staphylococcus aureus*.

How the list was created

The Association of Medical Microbiology and Infectious Disease (AMMI) Canada established its *Choosing Wisely Canada* list of "Five Things that Physicians and Patients Should Question" by convening a Working Group of 14 members representing a diverse group of Infectious Diseases specialists from multiple geographical regions, practice settings and institution types, with varying years in practice. Following a survey of AMMI Canada membership to identify low-value practices within Infectious Diseases, the Working Group developed a list of 23 declarative statements. In an iterative process, Working Group members were invited to rank and comment on all recommendations online. Practices that met the following four criteria received highest ranking: (i) within the purview of Infectious Diseases practice; (ii) frequently encountered in practice; (iii) significant potential for uptake by other physicians and societies; and (iv) likely to have significant overall impact on the value of care provided by the members of our profession. The Top Five list was shared with AMMI Canada membership electronically and during a national open forum at the AMMI Canada – CACMID Annual Conference held on April 18, 2015, in Charlottetown, PEI, to obtain feedback. Following minor refinements, the AMMI Canada Executive Council and Guidelines Committee provided full endorsement and support for the final list.

Sources

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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.

For more information on *Choosing Wisely Canada* or to see other lists of Five Things Physicians and Patients Should Question, visit www.choosingwiselycanada.org. Join the conversation on Twitter @ChooseWiselyCA.

About The Association of Medical Microbiology and Infectious Disease Canada

The Association of Medical Microbiology and Infectious Disease Canada (AMMI) is a proud partner of the *Choosing Wisely Canada* campaign. AMMI Canada is the national association that represents physicians, clinical microbiologists and researchers specializing in the fields of medical microbiology and infectious diseases. Through promotion of the diagnosis, prevention and treatment of human infectious diseases and by our involvement in education, research, clinical practice and advocacy, AMMI Canada aims to serve and educate the public and also to enhance the career opportunities of its members through professional development and advocacy initiatives.