Antimicrobial Stewardship Matters

Antimicrobial Stewardship | November 2024

Antimicrobial resistance is invisible – patient harm is not

The Facts

Antimicrobial misuse and overuse accelerate antibiotic resistance, which has now been declared a global health threat. An estimated one out of 16 hospitalized patients acquire a multi-drug resistant (MDR) infection in Canada every year[1]. MDR infections are associated with higher patient morbidity, mortality and health care costs[2,3].

The death toll from antimicrobial resistance is increasing:

Year	Annual global patient deaths[4]	
	Directly attributable to resistance	**Associated with resistance**
2021	1.14 million	4.71 million
Projected for 2050	1.91 million	8.22 million

What Alberta Health Services is doing

On May 1, 2024, AHS announced the launch of a newly integrated provincial Antimicrobial Stewardship Program (ASP), under the Quality and Healthcare Improvement (QHI) portfolio. The ASP will be implemented in a phased approach across all AHS acute care sites. You can find more information about the ASP on Insite.

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Alberta Health Services
Antimicrobial Stewardship

Do your part

Before prescribing antibiotics, ask yourself three questions:

1. **Does my patient need antibiotics?**

Yes	No
• Confirmed bacterial infection • Fever in a critically ill/septic patient	• Infection commonly caused by viruses • Bacterial colonization (eg. asymptomatic bacteriuria) • Fever in a stable patient with no clear infectious source

2. **What is the harm of prescribing antibiotics?**

- Increased patient and population level antibiotic resistance
- *C. difficile* infection (CDI) – Antibiotics are the single greatest risk factor for CDI with 96 per cent of CDI patients prescribed an antibiotic in the preceding 14 days[5]
- Antibiotic adverse effects and toxicities – one in five inpatients who receive an antibiotic will experience an adverse effect[6]

3. **How do I minimize antibiotic-related harm?**

- Choose the narrowest spectrum agent that will cover the responsible pathogen(s)
- Prescribe the shortest course of therapy that is still effective
    - Short course therapy is non-inferior to longer durations for many infections and has the added benefits of limiting antibiotic exposure and minimizing antibiotic resistance
- Reassess patient at 48 to 72 hours for de-escalation based on culture & susceptibility results and for IV to PO switch as appropriate.

References are available upon request

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