

Antimicrobial Resistance (AMR), Healthcare-Associated Infections (HAIs) and Measurement and Surveillance

Background: The purpose behind this briefing note is to share details of an ongoing collaborations of partners working to advance the measurement and surveillance of antimicrobial resistant- healthcare-associated infections for Canada.

Antimicrobial Resistance (AMR)

A “**slow moving disaster**”. This is the term used to describe Antimicrobial Resistance (AMR) by the former Director-General of the World Health Organization. Antimicrobial Resistance is one of the most serious threats to human health and public safety and without harmonized and immediate action, the world is facing a post-antibiotic era in which common infections could once again kill (World Health Organization, 2015).

Preventing the emergence of Antimicrobial Resistance needs to happen on multiple levels. In the most vulnerable population, those admitted to hospitals, antimicrobial resistant organisms might lead to healthcare-associated infections that are difficult, if not impossible to treat.

Healthcare-Associated Infections in Canada

Every year it is estimated that 220,000 Canadian patients (approximately one in nine) will develop an infection during their stay in hospital (healthcare-associated infection), which is estimated to cost more than \$100 million annually (Zoutman et al, 2003). An estimated 8,000 of those patients will lose their lives from these healthcare-associated infections.

While progress has been made to prevent and control healthcare-associated infections in hospitals, more needs to be done. Preventing the transmission of antimicrobial resistant organisms in healthcare facilities, in particular with the emergence of bacteria resistant to the most powerful antimicrobials (e.g., carbapenem-producing Enterobacteriaceae), is key.

Canadian Partners in the Field of Healthcare associated infections and Antimicrobial Resistance

Patient Safety: An Infection Prevention and Control Action Plan

Together the Canadian Patient Safety Institute and the Public Health Agency of Canada hosted a national infection prevention and control summit in November 2014 in Toronto, Ontario. Over 40 participants came together to advance Infection Prevention & Control practices and reduce healthcare-associated infections in Canada.

At the Infection Prevention & Control Summit meeting, there was overwhelming consensus from stakeholder participants (including federal/ provincial/territorial representatives) that measurement and surveillance, specifically improving consistency in surveillance practices across the country, is needed to reduce the incidence and burden of preventable infections

(Canadian Patient Safety Institute, 2015). For this goal to become a reality, several action steps were identified.

1. Identification of standardized pan-Canadian set of case definitions for healthcare-associated infections.
2. Widespread adoption and application of these definitions across the country. Currently there is not a consistent approach across provinces/territories or within some provinces for how infections are defined and measured.
3. Establishment of a pan-Canadian repository to collect, analyse and report healthcare-associated infections.

When presenting before this Committee on June 15th, Dr. Andrew Morris noted the absence of Canadian data on antimicrobial resistant organisms; this is a gap that needs to be rectified. The Canadian Patient Safety Institute (CPSI), The Association of Medical Microbiology and Infectious Disease (AMMI) Canada and Infection Prevention and Control Canada (IPAC Canada) have partnered in initiatives to reduce AMR, by providing surveillance data on healthcare-associated infections – including those caused by AMR organisms – that forms the basis for improvement.

We urge the implementation of a national surveillance strategy for healthcare associated infections and antimicrobial resistant organisms, in keeping with what has been done in other leading international jurisdictions. Much work has already been done and several partners are united in seeking this goal.

We remain available to answer any questions you may have.

The Canadian Patient Safety Institute (CPSI)

The Canadian Patient Safety Institute (CPSI) is a not for profit organization that exists to raise awareness and facilitate implementation of ideas and best practices to achieve a transformation in patient safety. Funded by Health Canada, CPSI reflects the desire to close the gap between the healthcare we have and the healthcare we deserve

The Association of Medical Microbiology and Infectious Diseases (AMMI) Canada

AMMI Canada is the national association representing Canadian physicians, clinical microbiologists, laboratory technologists, and other members (including nurses and pharmacists) whose roles are to prevent, diagnose, and treat infections. AMMI Canada has been actively involved in infection prevention and control through its Canadian Hospital Epidemiology Committee (CHEC) of which the Canadian Nosocomial Infections Surveillance Program (CNISP), from the Public Health Agency of Canada (PHAC), is a sub-committee.

Infection Prevention and Control Canada (IPAC Canada)

Infection Prevention and Control Canada (IPAC Canada) is a national multidisciplinary organization for health professionals and others involved in the prevention and control of infections. Membership includes professionals in acute care settings, long term care, community and public health, emergency services, epidemiology, and mental health, to name a few.

References

Canadian Patient Safety Institute. (2015). An Infection Prevention and Control Action Plan. Available from:

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World Health Organization. (2015). Global Action Plan on Antimicrobial Resistance. Available from: http://www.wpro.who.int/entity/drug_resistance/resources/global_action_plan_eng.pdf

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