

House of Commons Standing Committee on Health **Study on Antimicrobial Resistance in Canada**

Submission by: Infection Prevention and Control Canada

Antimicrobial resistance (AMR) is an urgent issue worldwide. The World Health Organization (WHO) recently acknowledged the importance of AMR and issued a call to action to address the escalation of resistance and associated threats to health. Canada has been recognized as a world leader in many aspects of health, yet we lag behind many international jurisdictions in the development and implementation of a national approach to address AMR.

What is IPAC Canada?

IPAC Canada is a national, multidisciplinary association committed to the wellness and safety of Canadians by promoting best practices in infection prevention and control through education, standards, advocacy and consumer awareness. IPAC Canada has over 1600 members.

What is the gap in Canada?

In order to be able to effectively implement change, it is necessary to be able to measure whether steps taken are having the intended impact. Through surveillance, which is one of the best measures of AMR, we have the number and rate of antibiotic-resistant bacteria (AROs) in the healthcare setting. In order to be able to carry out surveillance effectively, measurement needs to occur in the same way so ‘apples are compared to apples, and oranges are compared to oranges’. When carried out in a uniform manner, surveillance provides a measure of the burden of illness, establishes benchmark rates for internal and external comparison, identifies potential risk factors, and allows for the assessment of specific interventions

Currently in Canada, we largely measure the number and rate of resistant microorganisms in different ways across the country; as such, the process is fragmented. AMR, however, does not understand provincial and territorial borders. A fragmented approach defeats the goal of protecting the health of all Canadians and does not align with a *One Health* strategy or with the *Federal Action Plan on Antimicrobial Resistance and Use in Canada*.

We urge the implementation of a national surveillance strategy for antimicrobial microorganisms, in keeping with what has been done in other leading international jurisdictions [need to confirm which these are and name them]. Much work has already been done and a number of partners, including the Association of Medical Microbiology and Infectious Disease (AMMI) Canada, are united in seeking this goal [someone to confirm with AMMI that they are OK with us naming them in this note]. When presenting

before this Committee on June 15th, Dr. Andrew Morris noted the absence of Canadian data on AMR; this is a gap that needs to be rectified.

What currently exists nationally in Canada?

The Canadian Nosocomial Infection Surveillance Program (CNISP) was established in 1994. CNISP's objective is to report on rates and trends of national and regional hospital-associated infections (HAIs), including antimicrobial resistant organisms (AROs), strain types and resistance patterns, some of which have been identified by FPTs as priorities for AMR surveillance. CNISP surveillance provides key information that informs national and international reports (WHO) and also assists in the development of federal, provincial, territorial and local infection prevention and control programs and policies. When carried out in a uniform manner, surveillance provides a measure of the burden of illness, establishes benchmark rates for internal and external comparison, identifies potential risk factors, and allows for the assessment of specific interventions

At present, ONLY 65 sentinel hospitals from 10 provinces participate in the CNISP network. (<http://www.phac-aspc.gc.ca/nois-sinp/survprog-eng.php>). CNISP carries out national surveillance at using validated measurement tools (surveillance case definitions and protocols) that are reviewed annually. CNISP data is considered highly reliable, yet CNISP covers only a small fraction of the many healthcare facilities in Canada; most hospitals and all long-term care facilities are not currently able to participate in CNISP surveillance. The main reason for this is the fragmentation of case definitions and protocols across the country.

Discussions with CNISP have taken place under the auspices of the National Integrated Action Plan and CNISP surveillance could be extended across the country to include many more healthcare facilities, thereby providing a robust and accurate picture of AMR in Canada. The existing Canadian Network for Public Health Intelligence (CNPHI) could be leveraged to support data collection. CNPHI is a secure, web-based collection of applications and resources designed to fill critical gaps in Canada's public health infrastructure. It leverages the integration of disparate public health information resources and expertise for the direct benefit of local, regional and national decision-makers. CNPHI also is scalable and has the potential to expand beyond the biological community.

The Canadian Institute for Health Information (CIHI) has recently explored the use of information contained within the individual patient medical record as a source of data on AMR. While this method of data collection is efficient and allows for global reach across the country, it cannot provide the level of reliability needed to accurately define the level of AMR in Canada, or to ensure measures taken to address AMR are having the desired impact. CIHI data may end up playing a role in defining AMR in Canada at a very high level however this data will not be sufficiently actionable; accurate data that is closely linked to patients, such as data generated by CNISP, is a necessity for action.

What work has already been done?

- Collaboration with CNISP to explore expansion of the application of their pre-existing case definitions across all provinces and territories
- Identification of barriers and challenges to implementation of CNISP definitions nationally

- Development of pan-Canadian standardized case definitions for long term care facilities

What is needed?

Federal engagement with provincial and territorial partners at the ministerial and deputy ministerial level to establish a consistent national surveillance system with nationally-approved case definitions is needed in order to close gaps in the currently fragmented system of measurement for AMR. This will ensure AMR in Canada is reliably defined, that new threats and changing patterns in AMR are identified in a timely manner, and that measures taken to combat AMR are having a measurable impact. This will build on work already underway, and aligns with and supports implementation of the National Integrated Action Plan and the existing *Antimicrobial Resistance and Use in Canada: A Federal Framework for Action*. This also allows the federal government to fulfill its mandate of accountability to all Canadians. It will support this Committee in understanding whether recommendations it makes regarding AMR are having measurable results.

IPAC Canada and its partners are able to provide support to fulfil this endeavor and ensure its sustainability and efficacy.