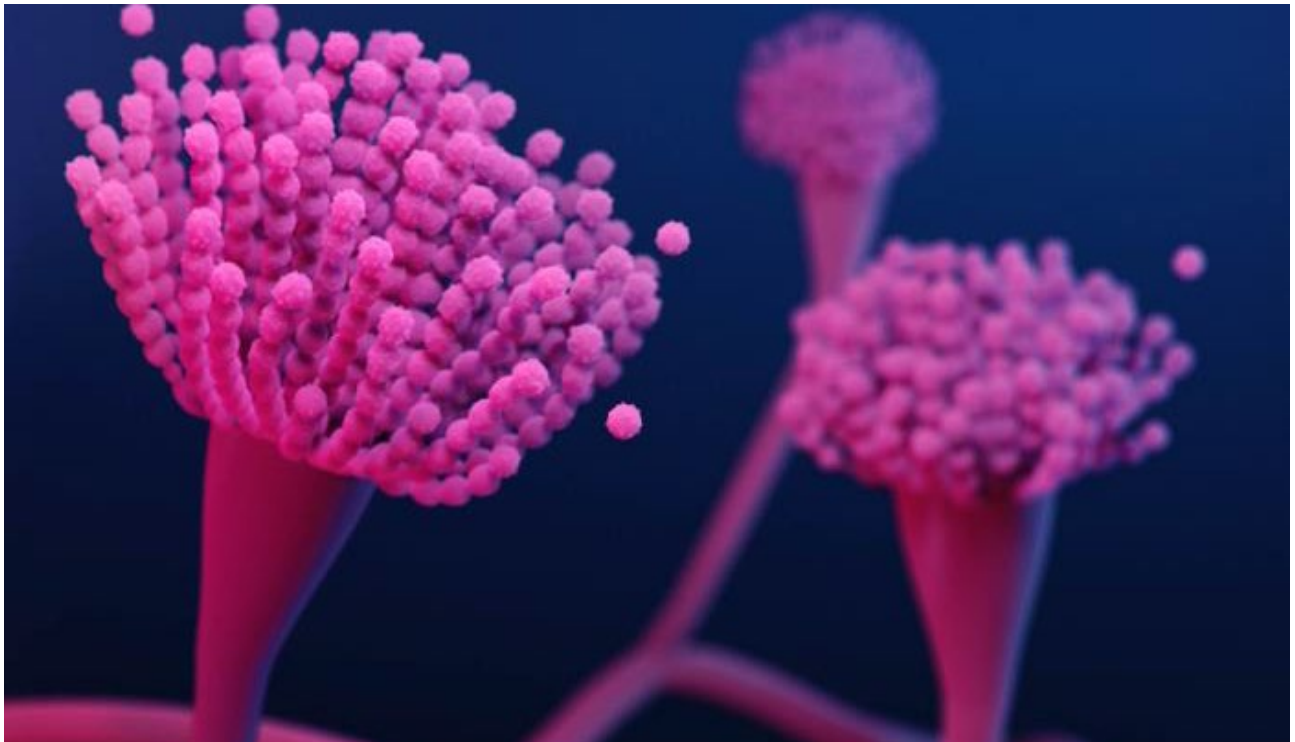


An Overview of the Pan-Canadian Action Plan on Antimicrobial Resistance and global efforts to respond to a major public health threat

Implications for HealthCareCAN members



PURPOSE

In June, the long-awaited [Pan-Canadian Action Plan on Antimicrobial Resistance](#) (“action plan”) was released by the Public Health Agency of Canada (PHAC) and the federal, provincial and territorial ministers of health and agriculture. Release of the action plan was delayed as federal, provincial and territorial partners, and other collaborators had to pivot to respond to the COVID-19 outbreak.

In this brief, HealthCareCAN overviews the action plan and highlights potential opportunities to come where healthcare organizations can contribute to national and global efforts in AMR research, surveillance, and stewardship.

BACKGROUND

The Pan-Canadian Action Plan on Antimicrobial Resistance (AMR) was expected to be released in the fall of 2019. At that time, HealthCareCAN [published a brief to advise members](#) on preparing for the plan's release by laying out what could be expected. HealthCareCAN has been supportive of the development of a pan-Canadian action plan on AMR and spearheaded activities including convening experts and stakeholders in a roundtable discussion on AMR stewardship and participating in Antibiotic Awareness Week campaigns. HealthCareCAN has also met with parliamentarians to push for more dedicated resources to address AMR.

Work resumed in 2022 when PHAC reestablished the federal and provincial/territorial (FPT) AMR Steering Committee and the four AMR task groups covering the action plan's original four areas of focus: research and innovation, surveillance, stewardship, and infection prevention and control. While much of the consultations were done before the COVID-19 pandemic, additional engagement took place after recommencement in 2022, including with Indigenous partners, to further inform action plan development.

CURRENT SITUATION

The World Health Organization (WHO) declared AMR a top 10 public health threat facing humanity in 2019.¹ The overuse and misuse of antimicrobials and the slow pace of development of new antimicrobials has very serious impacts for human health, animal health, the environment, and the economy.

Canada is seeing some positive progress in antimicrobial use trends. Between 2017 and 2021, antimicrobial use was trending downward overall with a more than 25% decrease in both community and healthcare sectors. As of April 2022, antimicrobial use has remained below pre-pandemic levels.

Nevertheless, according to [a report published by the Council of Canadian Academies](#), the proportion of infections resistant to first-line antimicrobials in Canada will likely grow from 26% in 2018 to 40% by the year 2050. This jump would increase the number of deaths directly attributable to AMR to an estimated 13,700 per year, up from an estimated 5,400 in 2018.

A drop in health sector antimicrobial use is a significant development in Canada. Regardless, inappropriate use in human health, misuse in agriculture and the agri-food sector and insufficient Research and Development, underscores the pressing need for a global and domestic coordinated multi-sector response to preserve the effectiveness of antimicrobials.

INTERNATIONAL EFFORTS TO ADDRESS AMR

A global response to address AMR is important to advance efforts in surveillance, stewardship, infection prevention and control, and research. The following is a quick overview of the action plans underway in Australia, the United Kingdom, the United States, and at the World Health Organization (WHO) as showcased in a recent report entitled, *The Global Research Agenda for Antimicrobial Resistance in Human Health*, released in June 2023.

AUSTRALIA

The Australian Government has released the [National Antimicrobial Resistance Strategy – 2020 and Beyond](#), which takes a “One Health”ⁱ approach to address AMR. The strategy aims to detect, predict, and respond to AMR by utilizing data-driven solutions, policy incentives, and industry investment.² Its overall goal is to minimize the development and spread of AMR while ensuring the availability of effective antimicrobials. Recognizing the interconnection between people, animals, plants, and the environment, the strategy is

ⁱ One Health is cross-sectoral approach which aims to balance the health of people, animals, and the environment when responding to global health threats.

supported by seven key objectives that guide all sectors at local, national, and global levels.³ These objectives drive transparent governance arrangements and establish clear responsibilities at the local, jurisdictional, and national level to ensure leadership, engagement, and accountability in combating AMR.³

UNITED KINGDOM

The UK Government developed [a five-year national action plan](#) to contain and control AMR by 2024. Published in 2019, the action plan focuses on optimizing antimicrobial use, minimizing the need for, and unintentional exposure to, antibiotics and supporting development of new antimicrobials.⁴ The UK aims to make significant contributions to global efforts by reducing infection burdens through effective treatment, optimal antimicrobial, and good stewardship across all sectors. The UK is also committed to advancing AMR research and development by implementing new diagnostics, therapies, vaccines, and interventions.⁵

UNITED STATES

The [U.S National Action Plan for Combating Antibiotic-Resistant Bacteria](#) includes coordinated, strategic goals to accelerate the U.S government's response to antimicrobial resistance and improve the health of all Americans by 2025.⁶ The action plan prioritizes infection prevention and control to slow the spread of resistant infections and ultimately reduce the need for antibiotic use. It adopts a One Health approach, recognizing the interdependence of human, animal, plant, and environmental health, and aims to understand antibiotic resistance in the environment.⁶

WHO GLOBAL RESEARCH AGENDA FOR AMR IN HUMAN HEALTH

As Canada released its action plan, the WHO published the [Global research agenda for antimicrobial resistance in human health](#), which prioritizes 40 research topics for evidence generation to inform policy by 2030. The priority research agenda is necessary in guiding stakeholders to generate evidence for effective policies and interventions on resistant infections, prevention strategies, optimal delivery in low- and middle-income countries, and improved diagnostics and medicines. The research priorities include prevention (infection control, and immunization), diagnostics, treatment (stewardship, use, and consumption), epidemiology, awareness, education, policies, and drug-resistant tuberculosis.⁷

THE PAN-CANADIAN ACTION PLAN ON AMR: 10 PRIORITY ACTIONS

The action plan provides a five-year blueprint beginning in 2023 for strengthening Canada's collective AMR preparedness and response to a global public health threat. It also takes a "One Health" approach similar to Australia and the United States. The action plan outlines 10 priority actions that together will guide federal/provincial/territorial commitments on AMR across five pillars: research and innovation, surveillance, stewardship, infection prevention and control, and leadership. Implementation of the 10 priority actions will be monitored and reported by PHAC to mark progress and adjust as necessary where new priorities emerge.

The 10 priority actions summarized are:

1. Develop incentives to accelerate access to new and existing antimicrobials and vaccines (*Research and Innovation*).
2. Create a national research strategy for combating AMR across all five pillars (*Research and Innovation*).
3. Further expand AMR and antimicrobial use surveillance data (*Surveillance*).
4. Establish baselines and targets and measures of progress for increasing appropriate antimicrobial use and reducing AMR in the health and the agriculture and agri-food sectors (*Surveillance*).
5. Implement guidelines for appropriate use in humans and animals for health professionals, veterinarians, and other prescribers (*Stewardship*).
6. Promote appropriate use of antimicrobials in humans and animals amongst the public, patients, farmers, and producers (*Stewardship*).

7. Increase effective implementation of infection prevention measures by updating and promoting uptake of guidelines and best practices for human health (*Infection Prevention and Control*).
8. Support the increased implementation of enhanced infection prevention and food safety protocols across the agriculture and agri-food sectors (*Infection Prevention and Control*).
9. Create a “network of networks” to support action plan implementation (*Leadership*).
10. Increase Canada’s contributions to global efforts to advance key bilateral and multi-lateral AMR commitments (*Leadership*).

IMPLICATIONS

The [communiqué](#) released at the May 2022 G7 health ministers’ meeting highlighted the commitment of G7 countries to address global health challenges, including AMR, while underscoring the need for resource allocation to thoroughly address AMR that may lead to an increase in funding and support for AMR initiatives.

Two months before the release of the action plan, the [Government of Canada announced \\$6.3 million](#) to Combatting Antibiotic Resistant Bacteria Biopharmaceutical Accelerator, or CARB-X. [CARB-X](#) is a global partnership with Germany, the UK, the USA, and the Gates Foundation designed to accelerate the development of new antibiotics, vaccines, and diagnostics.

The release of the action plan comes without funding to act on the action plan’s 10 priorities. The previous federal minister of health’s mandate letter included a commitment to take steps to preserve the effectiveness of antimicrobials, but with the cabinet shuffle in July, it remains to be seen what responsibilities will be carried over to the new minister of health, the Hon. Mark Holland.

Canadian healthcare organizations can participate as sentinel hospital sites with the Canadian Nosocomial Infection Surveillance Program (CNSIP). Since 2019, the number of hospitals has nearly doubled, with 88 sites currently participating. Interested healthcare organizations not currently participating in CNSIP can [find out how to get involved here](#).

[Choosing Wisely Canada has recommendations on using antimicrobials prudently](#) in human health. Stewardship of antimicrobials has a major role in continuing the progress made in reducing overuse and misuse in human health.

HealthCareCAN will carefully review the forthcoming federal cabinet mandate letters for information pertaining to AMR and other issues that impact our members. We will keep members apprised of future announcements concerning the Pan-Canadian Action Plan on AMR.

FOR MORE INFORMATION

HealthCareCAN remains attentive to our members – if you or others in your organization have any questions or comments, we encourage you to contact us.

Emily Follwell
Policy and Research Analyst
efollwell@healthcarecan.ca

Marissa Persaud
Research and Policy Analyst
mpersaud@healthcarcan.ca

Jonathan Mitchell
Vice-President, Research and Policy
jmitchell@healthcarecan.ca

REFERENCES

1. World Health Organization. Ten threats to global health in 2019: Antimicrobial resistance. 2019. Retrieved from: <https://www.who.int/news-room/spotlight/ten-threats-to-global-health-in-2019>
2. Commonwealth Scientific and Industrial Research Organization (CSIRO). Minimising antimicrobial resistance. 2023. Retrieved from: <https://www.csiro.au/en/about/challenges-missions/antimicrobial-resistance>
3. Australian Government, Department of Health, & Department of Agriculture, Water and the Environment. *Australia's national antimicrobial resistance strategy – 2020 and beyond*. 2019. Retrieved from: https://www.amr.gov.au/sites/default/files/2022-11/australia-s-national-antimicrobial-resistance-strategy-2020-and-beyond_0.pdf
4. National Health Service Prevention Programme. Antimicrobial resistance (AMR). 2023. Retrieved from: <https://www.england.nhs.uk/ourwork/prevention/antimicrobial-resistance-amr/#:~:text=The%20UK%20Government%20has%20developed,food%20production%2C%20agriculture%20and%20research>
5. Department of Health & Social Care, His Majesty's Government. *Tackling antimicrobial resistance 2019-2024: the UK's five-year national action plan*. 2019. Retrieved from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1070263/UK_AMR_5_year_national_action_plan.pdf
6. Centers for Disease Control and Prevention. U.S. National Action Plan. 2021. Retrieved from: <https://www.cdc.gov/drugresistance/us-activities/national-action-plan.html#:~:text=The%20National%20Action%20Plan%20states,infections%20caused%20by%20antimicrobial%20Resistance>
7. World Health Organization. Global research agenda for antimicrobial resistance in human health. 2023. Retrieved from: [who-global-research-agenda-for-amr-in-human-health---policy-brief.pdf](https://www.who.int/publications/m/item/global-research-agenda-for-amr-in-human-health---policy-brief)