One Health Against Pathogens

2026 Policy Challenge

Participant's Guide

Antibiotic Use and Resistance in Canada

Table of Contents

Contact Information

Program Staff

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Introduction

The Challenge

This year, each team of students will develop a 10–15-page policy brief in response to a call from Canada's **Standing Committee on Science and Research**.

Your hypothetical audience for this policy pitch should be the members of the Standing Committee. Please research the members of this committee as well as their scientific and educational backgrounds and write your brief at the appropriate level. Examples of reports made to the Committee can be found here:

- https://www.ourcommons.ca/committees/en/SRSR/StudyActivity?studyActivityId=13113678

Ph.D. students are responsible for writing and defending their policy, while the M.Sc. students are responsible for developing a strategy to communicate and defend the policy to the public. The communication strategy will comprise 3-5 pages of the total policy brief and may include the development of additional material (i.e. websites, quizzes, blogs, contacting journalists, an X account, or public outreach videos).

This policy brief must be scientifically sound and include the requested communication strategy. The policies will be presented orally to a group of judges as 30-minute presentations followed by 30-minute question periods during the Policy Challenge Retreat, scheduled to take place from **Monday, June 29, 2026, to Friday July 3, 2026**.

Other examples of policy briefs for similar assignments can be found here:

- https://www.mcgill.ca/maxbellschool/policy-lab-2024
- https://sciencepolicy.ca/posts/abby-christopher/

Team Assignments

Changes to team assignments can be made by request. Please contact the Associate Program Director with the name of the student who has agreed to switch with you.

Policy Question 1

Ph.D. Students		M.Sc. Students	
Student	Institution	Student	Institution
Gillian Cameron	McGill University	Jinha Suh	McGill University
Natalia Lorenc	McGill University	Suhao Yin	University of Guelph
Yihan He	McGill University		
Yuxiao Lu	McGill University		

Policy Question 2

Ph.D. Students		M.Sc. Students	
Student	Institution	Student	Institution
Alexandra Foley-Eby	University of Saskatchewan	Kira Mudrey	University of Saskatchewan
Cody Koloski	University of Saskatchewan	Sienna Brennan-Raab	McGill University
Ivan Drahun	Brock University		
Sarah Dickson	McGill University		

Policy Question 3

Ph.D. Students		M.Sc. Students	
Student	Institution	Student	Institution
Alice Hou	McGill University	Kyle Story	McGill University
Fiona Hui	McGill University	Marianne Djigo	McGill University
Shamsuddeen Yusuf Ma'aruf	University of Saskatchewan		
Supun Manathunga	McGill University		

Policy Question 4

Ph.D. Students		M.Sc. Students	
Student	Institution	Student	Institution
Jessica Hainault	Université de Montréal	Ben Sakdinan	McGill University
Pierre-Luc Longchamps	McGill University	Leslie Herrera	McGill University
Rafael Fernandes Ferreira	Université de Montréal	Marie Zoé Lapierre	Université de Montréal
Salomé Plat	University of Guelph		

Policy Question 5

Ph.D. Students		M.Sc. Students	
Student	Institution	Student	Institution
Kirsten Campbell	McGill University	Ethan Done	University of Saskatchewan
Laurianne Bédard	Université de Montréal	Hesham Adam	University of Saskatchewan
Melika Amoueian	McGill University	Lishita Rowjee	University of Guelph
Taylor Volappi	University of Saskatchewan		

Policy Question 6

Ph.D. Students		M.Sc. Students	
Student	Institution	Student	Institution
Alla Yushchenko	McGill University	Irelynd Tackabury	McGill University
Jonathan Rekve	University of Saskatchewan	Parichay Raj Subedi	University of Saskatchewan
Sarah Clarke	University of Guelph	Zoé Cros	McGill University
Yarina You	McGill University		

Policy Questions

Question 1

How should Canada manage the integration of surveillance of antimicrobial resistance (AMR) and antimicrobial use (AMU) across human, animal, and environmental sectors?

Context

Canada lacks a comprehensive, nationally integrated surveillance system for AMR that can integrate data from all relevant sectors (human, animal, and environmental health). Current systems are in place to collect data from livestock and major hospitals, but large gaps in surveillance remain in community settings, companion animals, wildlife, and other vulnerable populations. This lack of integrated data means that policy makers cannot reliably assess the local, provincial, and national drivers of AMR – or measure the success of any individual policy to address the crisis. The lack of data sharing mechanisms between Canadian federal agencies such as Health Canada, the Canadian Food Inspection Agency, and the Public Health Agency of Canada further complicate the issue.

Policy Objectives

In your opinion what is the best way to build an integrated AMR surveillance system in Canada? Please consider if we should:

1- Hire a private company
2- Ask existing federal organizations (for example Health Canada or the Public Health Agency of Canada) to oversee the development
3- Offer a grant to encourage the academic sector to develop a system
4- Create a new federal organization responsible for One Health that would be responsible for data integration across relevant sectors

Communications Objectives

Once you have suggested a mechanism for this problem, create a communication strategy to advertise and communicate your approach to the appropriate stakeholders (for example if you choose to hire a company, how would you advertise this contract? Or if you choose to offer a grant, how would you advertise the grant?).

Question 2

How could Canada improve Canadians' access to new antibiotics of last resort that are available in other countries?

Context

Based on the 2023 Report 6 of the Auditor General of Canada to the Parliament of Canada, Canadians have access to only 2 of 13 new antibiotics of last resort – which are commonly used to treat multi-drug-resistant infections. In contrast, the US has access to 13 and the UK has access to 8. During the COVID-19 pandemic Health Canada was able to put in place emergency measure to make the regulatory system more agile to quickly allow access to much needed health products.

Policy Objectives

As the AMR crisis continues to impact the health of Canadians, in your opinion, what could be done to improve access to novel antibiotics for Canadians? Please consider if we should:

1- Prioritize or expedite the review process for novel antibiotics that have already been approved by other international regulators (which regulators would be considered trusted?)
2- Harmonize with other partners to leverage existing global reviews
3- Provide a different regulatory pathway for novel antimicrobials
4- Develop better guidance to ensure that manufacturers are aware of the requirements for Canadian market access

Communications Objectives

Develop a commercial that the Government of Canada could air to inform the public about the antibiotic resistance crisis and how the Government of Canada is addressing the crisis by removing regulatory hurdles to make novel antibiotics of last resort available to Canadians.

Question 3

How could Canada improve novel antibiotic R&D incentives?

Context

Canada has limited policy incentives that stimulate domestic research into the development of new antibiotics.

Policy Objectives

How could Canada stimulate research into the development of new antibiotics? Please consider:

1- What is the role of the government in incentivising private companies to invest in research, and what is the best way to do this?
2- How can academic research contribute? How should the government support this?
3- Is there a role for the Public Service in antibiotic development?
4- What are the incentives to develop drugs specifically for agricultural use?

Communications Objectives

Develop a commercial ad campaign that the Government of Canada could air to inform the public about the antibiotic resistance crisis and how the Government of Canada is supporting home grown novel antibiotics.

Question 4

Should the Canadian Government encourage the use of delayed prescriptions?

Context

Some medical professionals have started to write delayed prescriptions as a way of combatting AMR to reduce unnecessary antibiotic consumption for self-limiting conditions. Basically, the physician writes a prescription with instructions for the patient to fill the prescription if symptoms worse. Some studies have shown that these “just-in-case" prescriptions lower antibiotic use overall, since many people feel better on their own and do not fill the prescription. However, the use of delayed prescriptions is controversial among physicians (1).

Policy Objectives

Should the Government of Canada encourage the use of delayed prescriptions as part of its antibiotic stewardship strategy? What would be the optimal mechanism for doing this? Please consider:

1- Health care is provincially mandated, and there are limited tools for the federal government to use
2- Physicians are regulated by Provincial and Territorial Medical Regulatory Authorities
3- What combination of regulatory oversight, financials incentives, and education would be appropriate in this situation

Communications Objectives

Develop a communication strategy to educate physicians about the practice of delayed prescriptions and their potential use as a strategy for reducing antibiotic use.

Question 5

How could Canada better inform the public about the antibiotic resistance crisis?

Context

A recent survey was carried out by the Public Health Agency of Canada (PHAC) to understand the knowledge, attitudes and practices in relation to antimicrobial resistance and antibiotic use (2). The survey found that misinformation about antibiotics was common: 32.5% of people believed that antibiotics could “kill viruses”; 27.9% said that antibiotics were “effective against colds and flu”; and 45.8% thought that antibiotics could be used to treat “fungal infections.” Misunderstanding was related to using unprescribed antibiotics and pushing for a prescription. In addition, people with lower income levels had a higher frequent use of antibiotics than their peers – indicating the profound inequity that misinformation introduces into the medical system.

Policy Objectives

What concrete measures should the government of Canada take to better educate the Canadian population about antibiotic resistance? Please consider if we should:

1- Develop an academic grant to encourage the use of citizen science to address misinformation
2- Create informative campaigns to specifically tackle important myths (that antibiotics kill cold and flu viruses)
3- Integrate antibiotic knowledge into elementary school curriculums
4- Have programs to target Indigenous communities in remote areas (what would this look like?)

Communications Objectives

Develop a communication plan to immediately provide targeted messaging about AMR to the most vulnerable demographics based on PHAC’s research. This communication plan should focus on young adults (18-34), individuals with lower educational attainment, and those with lower household incomes. The messaging should address antibiotic misuse and common misconceptions.

Question 6

Should Canada regulate environmental contamination of antibiotics, antibiotic resistant organisms, antibiotic resistance genes originating from agricultural producers?

Context

Antibiotics are commonly used on farms. It is well established that antibiotic residues, resistant organisms, and antibiotic resistance genes are disseminated from agricultural operations into the environment via wastewater and agricultural runoff.

Policy Objectives

Should Canada introduce regulations on the environmental contamination of antibiotics and antibiotic resistant and genes? Please consider:

1- The economic and food security impacts of further regulating the Canadian Agricultural sector
2- How is the spreading of manure and pesticides regulated? Is a similar approach applicable for antibiotic contamination?

Communications Objectives

Develop a communication guide to explain any regulatory changes to agricultural producers and other stakeholders.

Excluded Elements

Students participating in this policy challenge are not expected to conduct a review of the legality of any of the policies they propose. Students are also not expected (or allowed) to conduct any type of public survey to generate data or information about the policy they propose, or how the public may react.

Scoring Rubrics

Policy Brief Document

Scientific Justification The brief contains a literature review that is relevant, comprehensive, and current The justification demonstrates a clear understanding of key concepts and existing frame works	**40%**
Insight The brief includes cases and/ or examples that are relevant and consistent with the suggested policy The policy recommendations show new perspectives and fresh ideas	**20%**
Feasibility Clear and feasible recommendations have been made Information or examples are included to indicate that the recommendations are politically viable	**20%**
Communication The document is well written and logically structured The document looks professional and well put together A strategy and related resources are constructed to communicate and justify the proposed policy to the public	**20%**

Policy Pitch Presentation

Scientific Justification The team demonstrated a strong understanding of the central topic and connected issues	**10%**
Communication Plan The team had a clear and feasible plan to communicate the policy to the public	**10%**
Communication Materials The team developed and demonstrated the usefulness of public outreach materials to communicate the plan (i.e. twitter feed, blog, commercial, interactive website)	**10%**
Political and Public Feasibility The team demonstrated why their policy was political feasible, identified potential areas of public push-back, and was ready to make convincing counter points	**10%**
Case studies and examples The team provided at least one concrete example of a situation in which their policy would apply and how it would help to resolve an existing or emerging situation	**10%**
Insight The team demonstrated new ideas and fresh perspectives	**10%**
Persuasiveness The team delivered several persuasive arguments supporting their policy	**10%**
Quality of the Presentation The presentation was audible and engaging	**10%**
Participation All members of the team had a role and participated actively in the presentation	**10%**
Questions & Answers The team anticipated questions and had excellent answers prepared	**10%**

References

1- Mcleod, Monsey, et al. "How, why and when are delayed (back-up) antibiotic prescriptions used in primary care? A realist review integrating concepts of uncertainty in healthcare." BMC Public Health 24.1 (2024): 2820.

2- Understanding Canadians' knowledge, attitudes and practices related to antimicrobial resistance and antibiotic use: Results from public opinion research. https://www.canada.ca/en/public-health/services/reports-publications/canada-communicable-disease-report-ccdr/monthly-issue/2022-48/issue-11-12-november-december-2022/antimicrobial-resistance-antibiotic-use-results-public-opinion-research.html Accessed January 26, 2026