June 1st, 2026

Submission to the OHAP Policy Challenge Judges and Presentation Coaches

Introduction

Antimicrobial resistance (AMR) is one of the most serious global public health threats of the 21st century. As bacterial infections increase and become more resistant worldwide, existing antibiotics are becoming less effective, and previously treatable infections are becoming more dangerous (World Health Organization [WHO], 2023). Despite the urgent need for new antibiotics, the global development pipeline remains weak and underfunded. Unlike drugs for chronic diseases, antibiotics are typically used for short periods of time and are intentionally conserved by prescribing physicians, who have begun to prescribe infection-specific antibiotics only when strictly necessary (Renwick et al., 2016). This helps slow the development of resistance by reducing the frequency of which bacteria are exposed to antibiotic treatments, reducing the opportunities for resistance to develop (Renwick et al., 2016). However, increasing resistance and declining rates of prescription have caused antibiotic research and development (R&D) to be considered financially unattractive to pharmaceutical companies due to its limited long-term profits. AMR is also inherently a One-Health challenge, as it spans human, animal, and environmental health (Velazquez-Meza et al., 2022).

This policy brief presents suggestions for how the Canadian government should play a central role in incentivising antibiotic R&D through a combination of push incentives, pull incentives, public-private partnerships, and regulatory reforms. In addition, we share approaches on how government and academic institutions can contribute to antibiotic development through various incentivising strategies of antibiotic R&D.

Role of the Academic Sector

Academic institutions play a critical role in early-stage antibiotic discovery. Unlike pharmaceutical companies constrained by commercial timelines, universities and research institutes can pursue long-term, innovation-driven science. Currently, for example, researchers are identifying new bacterial targets, studying resistance mechanisms, and exploring how pathogens evade immune responses. This is critical for the discovery of novel therapies that can address multidrug-resistant infections.

Academic research is particularly valuable for the development of next-generation strategies to combat antibiotic resistance, such as next-generation antimicrobial approaches like CRISPR-based antimicrobials and phage therapy. CRISPR-based antimicrobials are programmable tools that can precisely target bacterial resistance genes or essential bacterial

DNA, offering a more precise alternative to traditional broad-spectrum antibiotics (Mayorga-Ramos et al., 2023). Similarly, phage therapy uses bacteriophages, viruses that selectively infect and destroy bacteria. Unlike conventional antibiotics, phages can target specific pathogens while preserving beneficial microbiota and may also help treat infections involving bacterial biofilms (Lin et al., 2017).

Emerging technologies such as artificial intelligence, machine learning, and synthetic biology further expand the antibiotic discovery toolkit by enabling rapid compounds screening and predicting molecules with antimicrobial activity.

Through all of this, academic institutions contribute to the training of highly skilled researchers. Canadian universities educate microbiologists, immunologists, pharmacologists, and biotechnology specialists who are essential for sustaining the country's research capacity. Antibiotic resistance is influenced not only by scientific challenges but also by antibiotic misuse and overprescription. Researchers in public health and epidemiology can study prescribing behaviors and public attitudes to develop evidence-based stewardship strategies that reduce inappropriate antibiotic use, and preserve the effectiveness of new therapies. Translational research programs are equally important because they help bridge the gap between laboratory discoveries and clinical applications. Without support for this transition stage, many promising discoveries fail to progress into therapies that can benefit patients. Investing in antimicrobial research therefore supports not only the protection of public health, but both scientific innovation and workforce development as well.

Role of the Public Sector

Canada currently has a limited policy system specifically designed to stimulate domestic antibiotic innovation. Although Canadian institutions contribute significantly to microbiology and biotechnology research, there is no strong national framework that sufficiently encourages private-sector investment in novel antibiotic development. The country remains heavily dependent on pharmaceutical investment from the United States and European Union.

The problem is structural: pharmaceutical companies deem antibiotic antibiotic R&D a high-risk, low-return investment, especially compared to drugs for chronic conditions, because they are only prescribed for short durations. Developing narrow-spectrum or pathogen-specific drugs is considered financially unattractive due to niche market size, high regulatory hurdles, and uncertain long-term profitability (Acosta *et al.*, 2025). Clinical trials are often complex and expensive due to the need to recruit patients with resistant infections, and developing a new antibiotic can require years of research and funding, with no guarantee of success (Outterson et al., 2021).

Central to these structural economic complications is the mandate for strict antimicrobial stewardship. Antimicrobial stewardship refers to a coordinated, evidence-based framework of interventions designed to optimize the selection, dosing, route, and duration of antimicrobial therapy to ensure the best clinical outcomes for patients while minimizing toxicity and the conditions that drive resistance (Carson *et al.*, 2025). From a public health perspective, new and highly effective antibiotics must be treated as precious resources; they are intentionally held in reserve and prescribed only as a last resort when older, broad-spectrum therapies fail. However, while this conservation strategy is vital for preserving the long-term efficacy of the medical arsenal, it fundamentally breaks the traditional pharmaceutical business model. Because commercial returns in pharmaceuticals are historically driven by high sales volumes, enforcing strict stewardship policies aggressively suppresses a drug's market utilization, and traps innovative biotechnology firms in an economically unsustainable market failure.

Agricultural antibiotic R&D carries its own distinct disincentives: regulatory pressure to reduce agricultural antibiotic use limits projected market growth, farmers' thin margins constrain what they can pay for novel drugs, and antimicrobials deemed medically important for humans are more likely to face agricultural restrictions, which reduces the expected return on investment for developers. Stewardship programmes also encourage limited use of new antibiotics to preserve their effectiveness, further reducing sales volumes (Årdal et al., 2020). The result is a market that consistently underproduces a product of enormous public value.

Closing this gap requires direct government intervention. The Canadian government can play a central role in stimulating antibiotic innovation by strengthening academic research programs and reducing the financial barriers associated with antimicrobial discovery. Government support through agencies such as the Canadian Institutes of Health Research (CIHR) and the Natural Sciences and Engineering Research Council of Canada (NSERC) can provide researchers with the stable long-term funding needed to investigate novel antimicrobial therapies, resistance mechanisms, and emerging technologies. Dedicated AMR grant streams would allow researchers to pursue projects that commercial funders will not touch. CIHR's AMR Research Initiative, which has provided approximately CA$1.8 million annually in research grants since 2016, and Agriculture and Agri-Food Canada's Agri-Science program, together, demonstrate that this infrastructure exists, but the scale of investment has not kept pace with the scale of AMR threat (Public Health Agency of Canada, 2017).

Incentivizing the Development of Antibiotics Specific for Agricultural Use

Antimicrobial use in livestock, crops, humans, and the environment is interconnected through the evolution and spread of resistant microorganisms and resistance genes (Al-Khalaifah *et al.*, 2025). Public agencies can coordinate research across these sectors by establishing a national research strategy. In fact, the Pan-Canadian Action Plan calls for expanding AMR surveillance infrastructure across One-Health sectors. More investments in genomic sequencing, wastewater testing, and agricultural monitoring will enable early detection of emerging threats.

While global attention focuses on human medical R&D, the agricultural sector remains reliant on older, broad-spectrum antibiotics, many of which are shared with human medicine. Antimicrobial stewardship guidance from the World Organisation for Animal Health (WOAH) and the Food and Agriculture Organization (FAO) has increasingly encouraged a transition toward targeted antimicrobial use, improved diagnostics, and reduced dependence on broad-spectrum compounds in agriculture (Carson *et al.*, 2025). However, private R&D has historically favoured broad-spectrum antibiotics because they serve larger markets, are easier to deploy in settings where rapid pathogen-specific diagnostics are unavailable, and offer stronger commercial viability than highly specific antimicrobial products. Without intervention, market incentives will continue to favour the very compounds that stewardship guidance is trying to phase out. This is precisely the gap that government policy must fill.

Push Incentives: Supporting Early Stage Research

Push incentives are policies designed to reduce the cost of research and development before products reach the market.

Expanded public funding

One important strategy is increasing government grants and research funding. Canada should expand targeted funding through agencies such as the Canadian Institutes of Health Research, the National Research Council Canada, and the Public Health Agency of Canada. Dedicated antimicrobial research funds could support basic science, preclinical studies, and innovative technologies such as bacteriophage therapy, antimicrobial peptides, and artificial intelligence-based drug discovery (Government of Canada, 2025).

Expanded tax credits

Enhanced tax credits would reduce operational costs for biotechnology companies and encourage more domestic and international firms to conduct antibiotic research in Canada. Existing programmes such as the Scientific Research and Experimental Development (SR&ED) tax credit could be expanded to provide additional support for antibiotic-related research.

Creation of a national AMR consortium

Another effective strategy is strengthening public-private partnerships (PPPs). Canada could establish a national antimicrobial innovation consortium similar to the Combating Antibiotic-Resistant Bacteria (CARB-X) Biopharmaceutical Accelerator, which coordinates funding and technical assistance across academic institutions, biotechnology companies, and hospitals (Outterson et al., 2021). Shared infrastructure for genomic sequencing, bioinformatics, and high-throughput drug screening would reduce duplication, and accelerate the translation of laboratory discoveries into clinical candidates. Interdisciplinary graduate training programs combining microbiology, bioinformatics, and public health, for example, could support Canada's development of a scientific workforce, long-term.

International precedent supports this approach. In the United States, the Biomedical Advanced Research and Development Authority (BARDA) directly funds late-stage clinical development through its Broad Spectrum Antimicrobial Program, while the European Union's New Drugs for Bad Bugs initiative supports research and development. Together, these programs invest nearly US$1 billion and support about 20 % of the global antibiotic pipeline (Eichberg, 2015). By sharing financial risk and providing predictable funding, these initiatives have become critical drivers of new antibiotic candidates. Canada's public sector can draw on lessons from BARDA and the EU to design its own mechanism.

Pull Incentives: Rewarding Successful Innovation

While push incentives support early research, pull incentives reward companies after a successful antibiotic reaches the market. These incentives are critical because they improve long-term financial sustainability.

Subscription-based payment

One promising approach is the subscription-based payment model, also known as the "Netflix model." Under this system, governments pay pharmaceutical companies a fixed annual fee for access to important antibiotics regardless of how much is used. This separates company profits from sales volume while supporting responsible antibiotic stewardship (Årdal et al., 2020). The United Kingdom has already piloted this model with positive outcomes, and Canada could implement a similar national programme. Canada is already piloting a pull-incentive model (Public Health Agency of Canada, 2024). The Antimicrobial Economic Incentives Pilot Project, led by PHAC with support from Health Canada and Public Services and Procurement Canada, and consultations with provincial and territorial governments and industry partners, will run for three years (fiscal years 2024–2025 through 2026–2027). The pilot aims to change revenue models by offering payments that delink revenue from sales volume, thereby making the Canadian market more attractive for companies developing high-value antimicrobials. Priority pathogens targeted by the pilot include *Enterobacteriaceae*, *Pseudomonas aeruginosa*, *Staphylococcus aureus*, *Neisseria gonorrhoeae* and *Acinetobacter baumannii*.

Market entry rewards

Canada could also introduce market entry rewards for companies that successfully develop antibiotics targeting priority resistant pathogens. These rewards would help companies recover development costs even if the drugs are rarely used. Since antibiotics provide broad societal benefits beyond direct profits, market entry rewards acknowledge their value as tools for public health.

Procurement guarantees

Government procurement guarantees are another useful strategy. Similar to vaccine procurement during the COVID-19 pandemic, Canada could commit to purchasing minimum quantities of newly approved antibiotics considered essential for national preparedness. Such guarantees would reduce commercial uncertainty and encourage private investment. Procurement guarantees must, however, include provisions to ensure that they do not concentrate global supply at the expense of low- and middle-income countries, which bear a disproportionate burden of AMR, as occurred with COVID-19 vaccine advance purchase agreements.

Push and Pull Incentives for Agricultural Adoption

Strategic Incentives for Livestock

Health Canada currently maintains a *Pathogens of Interest* list to prioritise regulatory reviews for drugs targeting high-risk pathogens and collaborates with other regulators to speed approvals. Building on this foundation, streamlining regulatory processes would reduce uncertainty for developers while signalling the Canadian government's commitment to advancing novel antibiotic development.

We propose a Category IV *Fast-Track*: a dedicated regulatory and financial pathway for antibiotics that demonstrate low potential for cross-resistance with medically important human antimicrobials. This track would incentivize the discovery of molecules tailored to pathogens associated with specific agricultural species, including antimicrobials that exploit microbial metabolic pathways, host-associated ecology, or narrow-spectrum targeting mechanisms (Butaye *et al.*, 2003, Melander *et al.*, 2018).

A particular priority would be the development of bacteriocin and phage libraries (biological agents capable of targeting specific bacterial strains with high precision). Supporting the development of a specialized, openly accessible biobank for phages would expand the genetic data available, and could support public-private co-funded commercial drug development. Novel antimicrobials that demonstrably target specific pathogens while minimizing disruption to broader microbial communities would be eligible to receive a reduction in regulatory fees, and an expedited review through the Veterinary Drugs Directorate.

To further stimulate private investment, the current SR&ED tax credit could be expanded to cover Category IV antimicrobials with no application in human medicine. This credit would provide additional rebate for R&D expenditures that directly demonstrate low potential for cross-resistance with antibiotics on the WHO's list of *Critically Important Antimicrobials for Human Medicine* (WHO, 2024).

Strategic Incentives for Crops

Although agricultural antibiotic use in crops is more limited than in livestock production, antibiotics remain important tools for managing certain bacterial diseases in orchards and vineyards. Unlike livestock, crop-applied antibiotics are released directly into the environment (Polianciuc *et al.*, 2020). This is particularly concerning with regard to the ecological persistence of these antibiotics, and subsequent resistance.

Currently, companies developing a drug that could serve both a livestock and a crop purpose must navigate two separate regulatory bodies: the Pesticides Regulatory Directorate and the Veterinary Drugs Directorate. We propose a *Joint Innovation Voucher* that covers the costs of dual-track regulatory filings to reduce administrative burden, and encourage multi-sector agricultural solutions. These incentives would extend to the delivery of the drug. Precision application technologies such as AI-assisted systems capable of detecting and diagnosing bacterial lesions on crops at the individual branch or leaf level would enable targeted treatment rather than orchard-wide application (Monteiro *et al.*, 2021, Toscano *et al.*, 2025).

Finally, to address environmental persistence, the development of biodegradable antibiotics should be incentivised. The government should provide advanced market commitments, such as market entry rewards or government-subsidized purchasing agreements for novel-mode-of-action antibiotics that are proven to be UV-labile or soil-biodegradable. By reducing the longevity of these compounds in soil and water systems, these products would have the potential to reduce the selective pressure that drives resistance development in the environment (Eikemo *et al.*, 2022, Landis *et al.*, 2018).

Consumer Adoption

A new drug will only be successful if farmers are able to afford to use it. To incentivize the adoption of novel agricultural antibiotics, a One-Health transition rebate can be implemented. Farmers who transition away from medically important antibiotics, toward newly developed antimicrobials intended exclusively for agricultural use would receive a deduction on their livestock/crop insurance premiums or additional tax credits.

Retailers and food producers can create premium market access by certifying products as "Raised with Responsible Antimicrobials," to indicate that antibiotics were used only when medically necessary and under stewardship standards designed to reduce antimicrobial resistance. This would allow consumers to align their purchasing decisions with public health and environment protection efforts, while enabling farmers who adopt lower-risk practices to receive preferred supplier contracts and stronger market positioning that offset the costs and risks of transitioning away from routine broad-spectrum antibiotic use. Beyond immediate economic incentives, this market-driven transition also helps the government to gradually implement a phased regulatory framework to restrict and ultimately phase out the commercial sale and non-therapeutic use of older, broad-spectrum antimicrobials in agriculture. By combining preferential market access for responsible practices with a legally binding schedule for product de-registration, it provides the necessary economic insulation for farmers while ensuring the systematic removal of high-risk, broad-spectrum agents from the domestic agricultural supply chain.

This policy aligns with the Standing Committee on Science and Research's emphasis on research excellence and innovation by supporting the development of precision antimicrobial technologies for agricultural use. Rather than subsidizing "more of the same", these incentives would reward the high-level scientific achievement of creating narrow-spectrum, environmentally degradable, and pathogen-specific or host-associated drugs.

Ensuring Equitable Access

Without explicit access provisions and equitable policy interventions in Canadian IP and commercialization frameworks, intellectual property protection and exclusivity risk stifling the impact of publicly funded innovations in Canadian AMR R&D, both domestically, and globally (UAEM, 2026).

At a minimum, non-exclusive licensing language should be the default approach for all biomedical-related licenses, with any justified exclusivity condition on access provisions for vulnerable, underserved populations in Canada, and populations in low and middle-income countries (UAEM, 2026).

Going further than the United States' NIH Intramural Access Planning Policy, which requires companies commercializing NIH-developed technologies to submit an access plan, but does not mandate them, Canada can build on the Canadian Access to Medicines Regime (CAMR) and the Canadian Patent Act to make access an enforceable requirement, rather than a guideline (UAEM, 2026). Embedding access in Tri-Agency funding agreement policies, CIHR or NSERC award terms, and other grants associated with public research will prevent publicly funded breakthroughs from being priced out of reach, while demonstrating that access requirements are compatible with commercialization (UAEM, 2026).

Domestically, a national pull-incentive can help ensure that new antibiotics are available to all Canadians. Under such a program, the federal government could establish a subscription-style national purchasing mechanism for priority antibiotics, linked to a pan-Canadian formulary. These contracts should require reliable national supply, distribution to rural, remote, northern, and Indigenous communities, clear shortage-management plans, and national antimicrobial stewardship oversight. This would ensure that new antibiotics are available when needed, but not overused.

Summary

Left unaddressed, AMR will impose mounting costs on Canada's health system, economy, and national security. Governments must intervene to encourage private-sector investment and protect public health. Strengthening domestic antibiotic innovation and manufacturing will improve Canada's preparedness for future AMR related infectious disease emergencies. Indeed, the Government of Canada has a critical responsibility to create policies that make antibiotic innovation financially sustainable.

Specialized scholarships, fellowships, and research internships focused on AMR would encourage students and trainees to enter the field. These programs would help Canada develop a highly skilled scientific workforce capable of addressing future infectious disease threats. Furthermore, by connecting universities, hospitals, biotechnology companies, and pharmaceutical industries, the government could support the development of more collaborative research infrastructure. Shared facilities for genomic sequencing, bioinformatics, and high-throughput drug screening would reduce research costs and improve access to advanced technologies. Expanding academic-industry partnerships and national AMR research networks could encourage collaboration and accelerate the translation of laboratory discoveries into clinical applications.

This brief has outlined a coordinated policy strategy across five pillars:

1. **Push Incentives**: Expanded public funding, enhanced tax credits, and a national antimicrobial innovation consortium to strengthen Canada's domestic research pipeline.
2. **Pull Incentives**: Subscription-based payment, market entry rewards, and procurement guarantees to reward successful innovation and improve long-term commercial viability.
3. **Agricultural Incentives:** Strategic push and pull incentives for livestock and crops, a Joint Innovation Voucher to reduce dual-track regulatory costs, a One-Health Transition Rebate for farmers, and targeted investments in precision application and UV-labile or soil-biodegradable antibiotics to mitigate environmental persistence.
4. **Workforce and Infrastructure**: Interdisciplinary training programs, AMR-focused scholarships, and shared research infrastructure as the long-term foundation of a sustainable domestic pipeline.
5. **Equitable Access:** Ensuring that access to publicly funded antibiotic innovations is an enforceable condition of commercialisation so that the scientific breakthroughs protect the people, and do not come at the expense of global health equity.

Communication Strategy

Introduction

Communicating this policy effectively requires first establishing why it is necessary. For this reason, every element of this ad campaign will convey the risks associated with antimicrobial resistance and multidrug resistant infections, and explain why addressing this global challenge is essential to protecting public health. While these risks have the potential to cause concern, our goal is establish the facts with reassurance, rather than alarm

For this reason, we will avoid ‘watering down’ the problems associated with AMR in our science communication. Trust in the scientific community has been eroding, and rebuilding it requires transparent, straightforward communication. Any concern raised by the risks presented should be offset by the protective measures this policy proposes.

Elements of the Campaign

Our communication strategy centres on a single long-form 5 - 10 minute piece covering Canada's AMR challenges and the policy proposed in this brief. From this, short-form clips and soundbites (1 - 2 minutes) will be extracted and posted across social media platforms such as TikTok, Instagram, Youtube, and BlueSky. In order to reach additional demographics, they will also run on cable television. Viewers engaged by the short-form content will be directed to the full video and official government websites such as the science.gc.ca blog for more information (conceptually). The long-form video will follow a consistent structure across each policy area: what the issue is, why it matters, and what can be done.

Content will be visually dynamic, with university students as "AMR sci-comm hosts" at different locations, cartoon graphics incorporated in the videos, and engagement with AMR researchers and students. This video content will also be adapted into infographics via Canva, for broader dissemination, namely for those who may prefer to read or share still images.

Short-form Commercials

This will be a series of four commercials, each one less than two minutes long. Each of the four commercials will focus on a single question/sector addressed by this policy:

- **Private Sector:** the role of private companies in tackling AMR and the financial incentives this policy offers to encourage their continued involvement in antibiotic R&D. This advertisement will focus on investment in Canadian pharmaceutical/biotechnology companies in particular to help boost local support and increase transparency surrounding the spending of taxpayer dollars.
- **Academic Sector:** the contribution of universities and research institutions to early-stage AMR research and knowledge generation, and the training of highly qualified personnel to sustain Canada's long-term research capacity.
- **Public Sector:** the government's responsibility to foster collaboration across sectors and ensure that treatments and innovations accessible by the private and/or academic sectors are available, and priced equitably and accessibly.
- **Agricultural Sector:** the importance of agriculture-specific and biodegradable antibiotics, and the benefits of precision application in mitigating environmental persistence and antibiotic resistance. Focus on the role of farmers and agriculture will ideally help boost support among rural communities.

Each commercial will follow the same structure:

- "What is it?"
- "Why should you care?"
- "What is being done about it?"

Other themes will include the urgency of AMR, the importance of funding, surveillance and equitable access, and cool, exciting examples from each sector (e.g. agricultural-specific innovations' biodegradable antibiotics). It will also be highlighted that said funding will be primarily directed toward Canadian companies, universities, institutes, and agriculture to increase support for national efforts against AMR, and increase transparency around how tax dollars are being spent. For accessibility, the videos will contain in-sync captioning.

This will make certain each advertisement contains the necessary information to understand why the related policy is important, while also remaining easily digestible by a non-specialist audience.

Long-form Commercial

Our communication strategy centres on a single long-form 5 - 10 minute piece covering Canada's AMR challenges and the policy proposed in this brief. From this, we will pull short-form clips and soundbites (1 - 2 minutes) which will be posted separately. This long-form video will contain information on the entire policy, including all four sectors and necessary background information on AMR. This video will be accessible through official government websites such as the PHAC webpage or science.gc.ca, along with this policy brief, for those who are interested in additional information surrounding the policy and the threat of AMR.

Canva Infographics

These infographics will be put together from the information provided by each short-form commercial. They will be designed as straightforward visual representations for those who prefer to read their news rather than watch it. They will use a calming and approachable colour scheme focused on the blues and greens often associated with science, healthcare, and positivity. These infographics will contain all the basic information surrounding one section of the policy, so as not to overwhelm readers, and will contain a QR code directing readers to the official government webpages containing this policy brief and all commercials/posts outlined above, along with the references to the information provided.

Target Audience

Young adults are the next generation in line to bear the long-term consequences of AMR, all the while having the capacity to drive change. Because of this, and their demographics' presence on social media, they will be the key focus - though our communication will aim to catch the attention of the general Canadian public. That being said, older demographics are more vulnerable to these drug resistant infections, which is why airing these commercials on local cable channels and printing Canva graphics in local print media will help spread awareness to this vulnerable community as well. While this policy brief itself is directed at policymakers, the commercial focusing on the agricultural sector will be specifically aimed at farmers. The messaging avenues for dissemination will be reflective of our target audience. To reach older farmers who may not be on social media, we will work with the Canadian Federation of Agriculture to ensure that we reach as many farmers as possible, in the most efficient way possible. This may look like, for example, producing audio content that will air on Rural Radio on SiriusXM, the national radio network for rural America and Canada that features agricultural news.

Dissemination Plan

Short-form content will be posted organically on social media, not as paid ads, in order to build credibility with the audience, and to avoid stigma/mistrust that could come with paid promotional scientific material. Each commercial will be a separate post on various social media platforms (e.g. TikTok, Instagram, Youtube, BlueSky, LinkedIn, etc.), and they will also air on local cable channels. Exposing the public to each commercial on a variety of platforms will allow us to reach a wider audience, and increase awareness about AMR and the policies addressed in this brief. The video content will be adapted into infographics via Canva and posted to Instagram and BlueSky, as well as printed and posted in local print media. All the materials will be made freely accessible (free use for educational purposes) and formatted to be understood by anyone aged 14 and above (9th grade science level). The content will be created and delivered by university students, which will give our campaign a more relaxed, accessible, peer-to-peer-like credibility. This will allow us to better resonate with younger audiences, and to distinguish our campaign and communication strategy from traditional science and policy communication. For the purposes of the policy challenge, we will be posting the commercials in English, though all the knowledge translation products would preferably have been produced in both official languages i.e. French and English.

Timeline

Before the four-video ad campaign and graphics, we will launch with preliminary “What is AMR” and “Why AMR Matters” videos before introducing the policy itself. This will allow those who our content reaches to have references and information in sources in short form, outside of the four sector specific commercials. All of the videos posted to social media will be spaced out and posted within a few days of each other (3-7 days). Thus, the ad campaign will run for about 1 month. Conversely, the Canva infographics will be posted online more sparsely.

Our social media metrics will be monitored weekly across all the platforms; reach, engagement, and traffic to the link to the full video on the Government of Canada’s Science Blog website (conceptual). This will help guide which type of videos work and which do not, to inspire future content including what could be posted during *World AMR Week* in November, for example. This will mark the first phase of our AMR communication strategy.

Long-term Projections (Hypothetical Future Phases)

Because social media content typically has a short-lived presence in people’s minds, we will work with established organisations to hone our communication strategy. Established organisations such as Youtube Health, PHAC, various agricultural boards, and student groups will be consulted and collaborated with to distribute and produce our content on AMR. We envision that this content generation and outreach/community building could lead to the establishment of a multi-streamed youth-led and youth-centred AMR organisation. Preliminary projects would include the creation of a digital and interactive AMR toolkit, for example. The aim of this organisation would be to get youth interested and involved in AMR research and policy from elementary/middle-school all the way to university, by organising various age-appropriate AMR centred-activities. This could evolve into youth-led podcasts, with the complexity of the discussions ranging for specific age groups; AMR-prevention cartoons roundtable discussions for older youth, and the opportunity to engage with MP, researchers, and public health professionals. Youth are not just the future; they are the present, so the best time to start engaging them is now.

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