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Executive Summary

Understanding Canadians' Awareness, Knowledge, Attitudes and Behaviours Related to Antimicrobial Use and Antimicrobial Resistance

Prepared for
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Canada

Understanding Canadians' Awareness, Knowledge, Attitudes and Behaviours related to Antimicrobial Use and Antimicrobial Resistance

Executive Summary

Prepared for: The Public Health Agency of Canada
Supplier Name: The Strategic Counsel

This public opinion research report presents the results of a three-phased study including two rounds of focus groups which were conducted prior to and following completion of a telephone survey conducted by The Strategic Counsel on behalf of Health Canada and the Public Health Agency of Canada.

Cette publication est aussi disponible en français sous le titre: Sensibilisation, connaissances, attitudes et comportements des Canadiennes et des Canadiens liés à l'utilisation d'antimicrobiens et à la résistance aux antimicrobiens

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Executive Summary

A. Background

Antimicrobial resistance (AMR) is a growing public health threat in Canada and around the world. Left unchecked, AMR could cause a return to a pre-antibiotic era in which common infections could once again become incurable, with grave consequences to the health of Canadians.

The Public Health Agency of Canada (PHAC) is responsible for coordinating national responses to public health threats and has identified AMR as such a threat. The Agency provides national leadership on the public health aspects of AMR and antimicrobial use (AMU) and as such has developed a Communications Plan for 2018-2020 that aims to increase awareness of AMR among Canadians and to promote the sound use of antibiotics.

Relevant public opinion research was last conducted well over 10 years ago, in 2007-2008, focusing on Canadians' knowledge, attitudes and behaviour related to pathogens and infection control which included the topic of antibiotic utilization. Other topics included nosocomial infection, the anticipated impact of pandemic influenza and the public's perceptions of their role in infection control. In addition to the work in 2007-08, a more recent study was conducted in 2014 to determine Canadians' pre-campaign AMR-related knowledge, awareness, and behaviours. Both of these surveys provided valuable information regarding the public's knowledge. Given the lack of more recent data on public opinion regarding this topic, it was determined that a study should be undertaken to gain a better understanding of the broader culture and context surrounding AMR and to obtain a comprehensive baseline assessment of the Canadian public's knowledge, attitudes and behaviours as they relate to AMR.

The data gathered from this research will be used to inform the implementation of the AMR Action Plan and follow-up activities. It will also inform the Government of Canada's policy positions and program activities related to AMR. The research findings will help strengthen the Government of Canada's understanding of the level of awareness and knowledge of antibiotic use and antimicrobial resistance among the Canadian public. In turn, this will guide the development of general awareness products and guidance/stewardship products for health professionals with the goal of making Canadians more informed health care consumers.

In particular, this study will enhance the capacity of the Government of Canada, other levels of government, non-governmental organizations and public health professionals to target interventions that will improve awareness, knowledge and behaviour related to AMR and to monitor the impact of collective investments in this area.

B. Study Objectives

This research program addressed a number of broad objectives. The study was designed to obtain information related to:

- Levels of awareness and knowledge of antibiotics, antibiotic resistance and related terminology;
- Perceptions of antibiotics, including perceived benefits and risks;
- Antibiotic use and behaviours as well as the factors underlying behaviours related to antimicrobial use;
- General attitudes and knowledge related to preventing infections;
- Views on the availability of public information on this issue;
- What Canadians feel is missing in terms of knowledge surrounding antimicrobial resistance and the type of information they feel would be useful; and
- How and where Canadians obtain information regarding antibiotic use, antibiotic resistance and antimicrobial resistance.

C. Methodology

To address the above-noted program objectives, the study was carried out across three phases:

- Phase 1 – Pre-Survey Focus Groups: Six in-person focus groups were undertaken in July, 2019 to gauge general awareness and familiarity with antibiotics and the topic of antibiotic resistance. This limited series of groups was intended to obtain some preliminary insight into attitudes and behaviours with respect to antibiotics and their use as input into the framing of concepts to be explored in a subsequent survey of Canadians and the language used to craft survey questions.
- Phase 2 – Telephone Survey: This research study was paused following Phase 1, with the onset of the pandemic in 2020 and did not resume until Fall/Winter 2021. A nationwide telephone survey, about 20 minutes in length, was administered to a random, representative sample of 1,500 Canadians, aged 18 and older, between December 10th, 2021 and January 7th, 2022. The survey further explored Canadians' attitudes towards antibiotics, as well as general usage and behaviours, familiarity with antibiotic resistance, levels of concern about overuse of antibiotics and key information sources/trusted spokespeople on the topic.
- Phase 3 – Post-Survey Focus Groups: Following completion of the survey and analysis of the results, a second round of 12 focus groups was conducted online between February 23rd and March 1st, 2021. In these groups, insights from the survey were further probed with a particular focus on the perceived causes of antibiotic resistance, potential responses and information needs which would be helpful in bringing greater public attention to this issue.

More detail on the methodology, including the specific goals and approach in each Phase, can be found in Section II – Objectives and Methodology.

D. Key Findings

The vast majority of Canadians have at least some familiarity with antibiotics – 91% report having taken them at some point in their lives and 80% of parents with children under age 18 report that their children have taken them. Just over a third of the adult population (37%) have used antibiotics within the last year, with just under one in five Canadians (17%) who report having taken antibiotics twice or more in the last 12 months.

There is some degree of confusion about how antibiotics work (e.g., biological properties and characteristics), and the appropriate use and application of antibiotics. Many are clear on the fact that antibiotics are used to treat bacterial infections – 81% of survey respondents say that antibiotics can kill bacteria. In focus groups, however, some participants were less sure, specifically in terms of the distinction between bacterial and viral infections. As such, a number of participants in each of the focus groups felt that antibiotics could be an appropriate treatment for both types of issues. This confusion was also apparent in survey responses:

- Just under half of respondents (46%) agreed that antibiotics are effective in treating fungal infections.
- Smaller, but still significant proportions believe that antibiotics can kill viruses (33% said this is true) and are effective against colds and the flu (28%).

Nevertheless, antibiotics are seen as a powerful class of drugs, with lifesaving impact in some cases. In focus groups, participants emphasized several key benefits, including the rapidity with which antibiotics resolve the medical issue being treated, alleviation of symptoms, especially pain and discomfort, and being able to quickly resume one's normal daily routine. Almost half (46%) of survey respondents said they would prefer not to take antibiotics in order to avoid any side effects. In further conversations with focus group participants on this issue, several also stated a preference for preventive approaches to reduce the likelihood of developing a medical issue that would require antibiotics, and/or making lifestyle changes, particularly through diet, to boost one's natural immune response.

At the same time, there are some perceived downsides or risks. Participants often mentioned side effects in addition to overprescribing and over-use of antibiotics (most respondents to the survey identified over-use of antibiotics as a major (43%) or minor (36%) problem in Canada). Several participants mentioned the declining effectiveness of antibiotics as a result. Focus group participants also commented that incorrect use of antibiotics contributed to this issue as well, specifically noting that the full course of antibiotics should be taken.

On balance, however, many felt the benefits of antibiotics clearly outweighed any risks. Parents voiced mixed views, with some seeing antibiotics as a low risk treatment option for children, given smaller dosages which are based on size and weight, while others expressed greater concern that over-prescribing among young children could be a more serious issue.

Focus groups offered an opportunity to have a more in-depth discussion regarding participants' perceptions of physicians' prescribing behaviour, their own expectations when it comes to treatment with antibiotics, as well as their usage behaviours. Participants described varying experiences in terms of physicians who prescribe antibiotics more or less readily, and prior to considering other treatment options. Most trust their doctors to recommend the appropriate course of treatment, whether that involves a prescription for antibiotics or a non-medical approach (e.g., rest, fluids, and waiting for symptoms to go away on their own). While some expressed a desire for their physician to suggest alternate, more 'natural' methods of treatment, before resorting to antibiotics, others expected an antibiotic to be prescribed based on their or their child's symptoms. Among the latter group there was a tendency to indicate they would likely seek a second opinion if their physician was reluctant to prescribe an antibiotic. Of note, very few participants recalled being given clear information from their physicians on the correct use and potential side-effects from antibiotics which they were prescribed. In participants' view, this was more commonly the practice of pharmacists.

Although some focus group participants did acknowledge they would consider stopping antibiotic use if their condition improved (15% in the survey said that it is safe to stop taking an antibiotic once you start to feel better), and that they had done so in the past, most felt it was important to take the full course. Survey results suggest that this attitude is more prevalent among younger, less educated, men. This was also borne out in the focus groups where male participants were more likely to admit not having finished the full course of an antibiotic, acknowledging that this had been a more common, albeit not regular, practice in their youth.

Sharing of antibiotics was also not a frequent practice based on participants' comments in the focus groups, although it occurred from time to time mainly for reasons having to do with convenience (e.g., avoiding the need to schedule a medical appointment). Similarly, retention of any unused antibiotics was not necessarily common (as most said they finished the full course), but was acknowledged as having been done on an occasional basis by some. Again, keeping any unused antibiotics was viewed as a way to quickly treat a reoccurrence of an infection, while also avoiding having to pay the cost of another prescription.

Many Canadians are generally familiar with antibiotic resistance and concerned about this issue, although focus groups suggest that they may not necessarily see the issue as particularly urgent or specifically relevant to them personally. With respect to terminology, Canadians are most familiar with 'antibiotic resistance' and least familiar with the term 'antimicrobial resistance' (68% have heard of/know what the former term means, while 25% say the same regarding the latter term). And, although over half of survey respondents (57%) indicated they are 'very worried' (16%) or 'somewhat worried' (41%) about this issue, findings from the survey as well as comments shared in focus groups suggest that it is not necessarily seen as a 'top ten' global public health threat. Relative to the pandemic, the prevalence of chronic health conditions (e.g., diabetes, cancer and heart disease) and climate change, antibiotic resistance is not viewed as a particularly urgent issue. In focus groups, participants commented that they likely would have heard more about it if it were urgent. At the same time, they acknowledged that COVID-19 was likely crowding out other important global health issues. From the survey, just one in five (20%) recall seeing anything

about this topic from the Government of Canada over the last five years, and fewer (12%) remember getting any information on unnecessary antibiotic use.

While most believe that this is an issue that could affect everyone (56%), in focus groups some felt that those who were immunocompromised might be more affected. There was also a sense that marginalized groups as well as those in the developing world may be more impacted by the issue, given systemic health and income inequities.

There is a general consensus the issue is, to a great extent, a factor of patient requests for antibiotics when they are not needed (53%), overprescribing by doctors (50%) and walk-in clinics (46%), and misuse (46%). Other factors are also seen as contributing to antibiotic resistance, including people obtaining them in ways other than through a doctor (43%) and overuse in livestock and fish farming (42%). Fewer felt that waste products from antibiotics entering the environment were a significant issue (30%).

In line with these survey responses, most focus group participants felt that patient and physician education were both key to addressing the issue of antibiotic resistance. Specifically, they were of the view that patients need to be given more information on why an antibiotic isn't being prescribed, that antibiotics should be used more judiciously and that physicians' prescribing behaviours should be monitored. There was also some interest in instituting a practice of delayed prescriptions. That said, some indicated it could prove challenging to shift patient expectations and habits, particularly the desire for instant relief from symptoms. By contrast, reducing travel was not seen as having much impact on the issue of antibiotic resistance. Although many survey respondents (70%) were worried that travel could lead to the spread of antibiotic resistance, most participants in the focus groups did not see a connection between the two.

E. Conclusions and Recommendations

There was a general consensus among participants in the focus groups that more public education is required on this topic. Many felt it was important to raise awareness of the issue and to provide Canadians with key facts and information which would enhance their understanding, prompt interest and ultimately action in the form of attitudinal and behaviour changes. Increased receptivity to the issue is, in some respects, linked to the rapid and extensive spread of COVID-19 worldwide over the last two years. Given this experience, participants appear to have developed an appreciation for, if not an in-depth understanding of, the way in which these types of issues can significantly impact humankind on a global basis if left unchecked.

Participants expressed a desire for data and information that would:

- Better explain the issue of antibiotic resistance, what it is, how it spreads, why it is important to address the issue, and what the implications are for Canadians if it is addressed;
- Encourage patients to ask questions of their health care provider if they are being prescribed an antibiotic, and specifically in regards to alternate treatment options; and
- Help the public to better manage symptoms and illnesses on their own, before resorting to antibiotics; and

- Demonstrate that antibiotics may not always be required or the best treatment; and
- Enhance Canadians' understanding of proper use in instances where antibiotics are prescribed, by encouraging physicians and pharmacists to reiterate the importance of taking them as prescribed (e.g., the full course), refraining from sharing antibiotics or saving them for later use, and discarding any leftover medicines safely.

Note to Reader

Unless otherwise noted, results shown in this report are expressed as percentages and may not add up to 100% due to rounding and/or multiple responses to a given question. Findings from the two qualitative phases of research reflect the views of a limited number of participants. While valuable in terms of providing further insight and understanding of the findings from the quantitative phase of research, they should not be generalized or extrapolated to the broader Canadian population of adults, aged 18 and older.

MORE INFORMATION

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To obtain more information on this study, please e-mail HC.cpab.por-rop.dgcap.SC@canada.ca

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Signed: _____