

TITLE:

Ranking the relative importance of COVID-19 immunisation strategies: a survey of expert stakeholders in Canada

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The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

INTRODUCTION:

Global efforts are underway to develop a novel coronavirus disease 2019 (COVID-19) vaccine and work is progressing at an unprecedented pace [1]. Once a successful COVID-19 vaccine becomes available, the initial supply is not expected to be sufficient to immunise the entire population right away. Certain groups will likely receive the vaccine earlier than others.

Many countries have started working on COVID-19 vaccine prioritisation strategies via their National Immunization Technical Advisory Groups (NITAGs). Notably, the United Kingdom’s Joint Committee on Vaccination and Immunisation published in June 2020 their interim prioritisation advice, which includes an early emphasis on frontline healthcare workers and those at increased risk of serious disease and death [2]. In Canada, the National Advisory Committee on Immunization (NACI) is identified in the pandemic strategy as the authoritative body for advice on vaccine prioritisation and program design [3].

The goal of Canada’s pandemic response is to minimise serious illness and overall deaths while minimising societal disruption as a result of the COVID-19 pandemic [4]. While all immunisation strategies are important, limited initial vaccine supply will likely necessitate the prioritisation of immunisation strategies to best achieve the pandemic response goal. Immunisation strategies proposed by the NACI Secretariat based on the Canadian Pandemic Influenza Preparedness guidance [3] and with input from NACI’s High Consequence Infectious Disease (HCID) Working Group included the following:

- Protect those who are most vulnerable to severe illness and death from COVID-19;
- Minimise transmission of COVID-19;
- Protect healthcare capacity; and
- Protect critical infrastructure.

Pandemic immunisation strategies need to be established early in order to inform federal, provincial, and territorial vaccine program planning, including which population groups to include in initial vaccination. However, the final pandemic vaccine recommendations in Canada cannot be made until more is known about the pandemic vaccine characteristics (e.g., efficacy, safety, dosing schedule), how well the vaccine works in different populations (e.g., elderly, those with high-risk medical conditions), and the supply situation. Until then, planning for a COVID-19 vaccine program with a clear vision of the relative importance of pandemic immunisation strategies is necessary.

The systematic consideration of ethics, in addition to other factors in vaccine program recommendations such as equity, acceptability, and feasibility, is enabled through evidence-informed tools and an overall framework that NACI uses when developing recommendations [5]. For guidance to uphold the ethical principles of inclusiveness as well as respect for persons and communities, the engagement of stakeholders and assessment of their values and preferences is critical. In addition to this stakeholder survey, NACI will consider survey data [6-8] on the acceptability of COVID-19 vaccines and prioritisation of immunisation strategies in the general public and high-risk groups in order to inform its guidance.

As part of the planning for pandemic influenza, a 2006 study of university students and staff investigated values in the allocation of scarce resources [9]. The preferred priority was to save the most lives (39.9%), and while 22.4% preferred a ranking system, 20.4% of respondents would save those most likely to die. In that study, respondents ranked “high priority” target groups for vaccination as: healthcare workers (89%), emergency workers (85%), children 2–12 years of age (73.6%), essential workers (60.3), and those who are vulnerable (55.6%). These results differ from a survey of the Canadian population in the midst of the COVID-19 pandemic, where the most commonly identified target groups for priority vaccination

include individuals with underlying medical conditions (57%), the elderly (53%), healthcare workers (22%), and frontline/essential workers (18%) [10]. Though the methodologies of these studies are different, the marked differences in results reveal the importance of assessing values and preferences of stakeholders in different contexts.

Canada's previously established pandemic influenza immunisation strategies [3], which took into account the results from the 2006 study, were not directly applicable to the COVID-19 pandemic due to differences in risk groups (e.g., elderly disproportionately affected), transmission (e.g., higher reproductive number), and impact (e.g., social and economic lockdown). There was a need to identify priority COVID-19 pandemic immunisation strategies in a timely fashion in order to inform public health decision-making and immunisation program planning. Therefore, the objective of this study was to conduct a rapid survey of selected expert stakeholders to establish as comprehensively as possible a preliminary Canadian perspective on the relative importance of pandemic immunisation strategies for different COVID-19 pandemic scenarios at the time of initial COVID-19 vaccine availability.

METHODS:

The survey was comprised of five questions that asked the respondent to rank, in order of importance with a rank of "1" being the most important, the four aforementioned COVID-19 pandemic immunisation strategies plus an optional respondent-specified strategy for each of the pandemic scenarios presented in Table 1. These scenarios are also visualised along a hypothetical pandemic curve in Figure 1. The respondent was asked to assume that the COVID-19 vaccine is in limited supply for each scenario and that the COVID-19 vaccine is safe and efficacious for all populations for the purposes of the survey. Other information was not collected.

Expert stakeholders were identified through consultations within the Public Health Agency of Canada (PHAC) and with NACI's HCID Working Group. These stakeholders included members of clinical and public health expert groups involved with PHAC, members of provincial and territorial committees and representatives from national Indigenous groups, patient and community advocacy representatives and experts from the CanCOVID network (<https://cancovid.ca/>), executives of Canadian health professional associations, and representatives of federal government departments, excluding PHAC (Table 2). An invitation to complete the survey, which was provided as a Word document in English and French, was sent by email to stakeholders in a format that facilitated shared review and discussion within their respective organisations. Members of expert groups (e.g., NACI) each provided individual expert responses, whereas organisational or provincial/territorial representatives each provided a single response on behalf of their organisation or jurisdiction.

The survey was conducted between July 22 and August 14, 2020. An email reminder was sent to non-responders to optimise the participation rate. The participation rate was calculated by dividing the number of responders by the sum of responders and non-responders. Survey results were analysed using descriptive statistics across all respondents to identify overall trends and by stakeholder group to assess for any differences in prioritisation among stakeholder groups. Trends in the rankings for each pandemic scenario were assessed by descriptive analysis in two ways: taking the average (mean, median, and mode) ranking and comparing the percentage of each ranking contributing to the total for each COVID-19 pandemic immunisation strategy for different pandemic scenarios at the time of initial COVID-19 vaccine availability.

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This study received approval from the Health Canada and the Public Health Agency of Canada Research Ethics Board (REB 2020-011P). The survey invitation letter and the study survey are available in the supplemental materials.

RESULTS:

Of 156 stakeholders contacted, 74 surveys were completed for a participation rate of 47.4%. A total of 22 (29.7%) respondents were members of clinical or public health expert groups involved with PHAC, 19 (25.7%) were patient or community advocacy representatives or experts from the CanCOVID network, 16 (21.6%) were executives of Canadian health professional associations, nine (12.2%) were members of provincial and territorial committees or national Indigenous groups, and eight (10.8%) were representatives of federal government departments. Two respondents returned blank surveys and these were not counted as completed surveys. Two respondents did not complete one of the survey questions and an additional 10 respondents did not provide distinct ranks in the order of importance (i.e., two or more strategies were ranked equivalently) for one (n=4 respondents) or more (n=6 respondents) survey questions. Responses with non-distinct ranks were not included in the analysis (sensitivity analysis including all responses was performed). Ten respondents also ranked strategies out of five, as an “other” strategy was specified, for at least one scenario; these other respondent-specified strategies were all considered by the study investigators to fall under one of the four predetermined strategies, but the rankings out of five were retained for analysis.

For all pandemic scenarios, both descriptive analysis approaches showed that stakeholders generally ranked the strategies in the following order from most to least important:

- 1. Protect those who are most vulnerable to severe illness and death from COVID-19
- 2. Protect healthcare capacity
- 3. Minimise transmission of COVID-19
- 4. Protect critical infrastructure

In subgroup analysis by stakeholder group, the trends were less clear due to smaller sample sizes, but the strategy to protect those who are most vulnerable to severe illness and death from COVID-19 remained the most important in all stakeholder groups and across pandemic scenarios. Sensitivity analysis including all responses, including those that had non-distinct ranks, did not differ in overall trends.

The average (mean, median, and mode) rankings and stacked bar charts of rankings for COVID-19 pandemic immunisation strategies for different pandemic scenarios at the time of initial COVID-19 vaccine availability are presented in Table 3 and Figure 2, respectively.

INTERPRETATION:

The present study showed that the surveyed stakeholders generally considered the most important immunisation strategy to be that of protecting those who are most vulnerable to severe illness and death from COVID-19 during the period of initial vaccine scarcity. This was followed in importance by the strategies to protect healthcare capacity and to minimise transmission of COVID-19 disease. In this supply constrained context, an immunisation strategy to protect critical infrastructure was considered the least important.

There are a number of important limitations to consider when interpreting the findings of this study. First, stakeholders were forced to treat the immunisation strategies presented in the survey as distinct, when in reality these strategies are overlapping to some degree. For example, those working in long-term care facilities could be targeted under all four immunisation strategies that were presented for ranking. Second, this study surveyed “key informant” stakeholders who acted as a proxy for their organisation or stakeholder group. Though respondents were encouraged to consult with others in their organisations, the survey responses may not be representative opinions of the respective organisations or groups. Third, the survey questions presented broad concepts that were open to interpretation. Respondents likely made differing assumptions based on their values and preferences in order to provide rankings.

Despite these limitations, the overall ranking of this expert survey mirrored surveys of the general public on the prioritisation of pandemic immunisation strategies. Canada’s COVID-19 Snapshot Monitoring Study (COSMO Canada) is a longitudinal study that surveyed a representative sample of approximately 2000 Canadians from April through September 2020 in eight waves [6]. When asked in Wave 7 (August 13–17, 2020) which immunisation strategies they would prioritise if COVID-19 vaccine supply is limited, a majority of respondents identified protecting those most vulnerable (51%) and protecting healthcare capacity (28%) as the most important strategies to determine which groups should receive the COVID-19 vaccine first when there is not enough vaccine for everyone when it first becomes available [7]. This was followed by minimising transmission (15%) and protecting critical infrastructure (5%). In the 2006 study of University of Alberta students and staff on the allocation of scarce resources during an influenza pandemic, the top choice for a priority access plan to the pandemic vaccine was to save the most lives [9]. This alignment lends confidence to the findings of the present study; however, these preliminary priority pandemic immunisation strategies will need to be further validated in follow up surveys, particularly with the general public and high-risk groups, which are planned for fall 2020.

The findings of this study provide a timely, preliminary expert perspective on priority COVID-19 pandemic immunisation strategies to guide early public health planning for the eventual COVID-19 vaccine or vaccines, including the development of guidance by NACI on the prioritisation of COVID-19 vaccines. The results of this analysis could prove useful for other countries around the world planning allocation of limited initial supplies of COVID-19 vaccine.

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FIGURE CAPTIONS:

Figure 1. Pandemic scenarios at the time of initial COVID-19 vaccine availability plotted along a hypothetical pandemic curve

Figure 2. Stacked bar charts comparing the percentage of each ranking contributing to the total for COVID-19 pandemic immunisation strategies for different pandemic scenarios at the time of initial COVID-19 vaccine availability

Scenario 1: The pandemic is still in progress and sustained community-level COVID-19 outbreaks continue. Scenario 2: There is a possible new wave of the pandemic with COVID-19 activity rising again after a post-peak period. Scenario 3: The pandemic is in the post-peak period and COVID-19 activity remains low. Scenario 4A: The pandemic is considered over, but COVID-19 continues to circulate at low levels. There is evidence that the vaccine (or previous infection) provides long-term protection against COVID-19, but a routine vaccination program may be required for new cohorts that are immunologically naïve. Scenario 4B: The pandemic is considered over, but COVID-19 continues to circulate at low levels. There is evidence that the vaccine (or previous infection) does not provide long-term protection against COVID-19 and a routine vaccination program will be required for much of the population.

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SUPPLEMENTARY FILES:

Supplementary File 1.
Sample survey invitation letter in English and French.

Supplementary File 2.
Study survey in English.

Supplementary File 3.
Study survey in French.

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Table 1. Descriptions of pandemic scenarios at the time of initial COVID-19 vaccine availability

Scenario	Description
1	The pandemic is still in progress and sustained community-level COVID-19 outbreaks continue.
2	There is a possible new wave of the pandemic with COVID-19 activity rising again after a post-peak period.
3	The pandemic is in the post-peak period and COVID-19 activity remains low.
4A	The pandemic is considered over, but COVID-19 continues to circulate at low levels. There is evidence that the vaccine (or previous infection) provides long-term protection against COVID-19, but a routine vaccination program may be required for new cohorts that are immunologically naïve.
4B	The pandemic is considered over, but COVID-19 continues to circulate at low levels. There is evidence that the vaccine (or previous infection) does not provide long-term protection against COVID-19 and a routine vaccination program will be required for much of the population.

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Table 2. List of surveyed expert stakeholders

Stakeholder group	Stakeholder
Clinical and public health experts*	• Canadian Pandemic Influenza Preparedness Task Group members • Committee to Advise on Tropical Medicine and Travel members • NACI members • NACI HCID Working Group members • PHAC Clinical Issues Task Group members
Health professional associations**	• Association of Medical Microbiology and Infectious Disease Canada • Canadian Dental Association • Canadian Geriatrics Society • Canadian Indigenous Nurses Association • Canadian Medical Association • Canadian Nurses Association • Canadian Paediatric Society • Canadian Pharmacists Association • Canadian Psychological Association • Canadian Public Health Association • College of Family Physicians of Canada • Community Health Nurses of Canada • Indigenous Physicians Association of Canada • Infection Prevention and Control Canada • Public Health Physicians of Canada • Royal College of Physicians and Surgeons of Canada • Society of Obstetricians and Gynecologists of Canada • Member organisations of Immunize Canada
Provincial and territorial committees and national Indigenous groups**	• Assembly of First Nations • Canadian Immunization Committee • Council of Chief Medical Officers of Health • Inuit Public Health Task Group • Inuit Tapiriit Kanatami
Federal government departments**	• Correctional Services Canada • Department of National Defence • Employment and Social Development Canada (Early Learning and Childcare, Learning Branch, Office of Disability Issues, Seniors Policy) • Health Canada • Indigenous Services Canada • Immigration, Refugees and Citizenship Canada • Royal Canadian Mounted Police
Patient and community advocacy representatives and experts*	• CanCOVID network

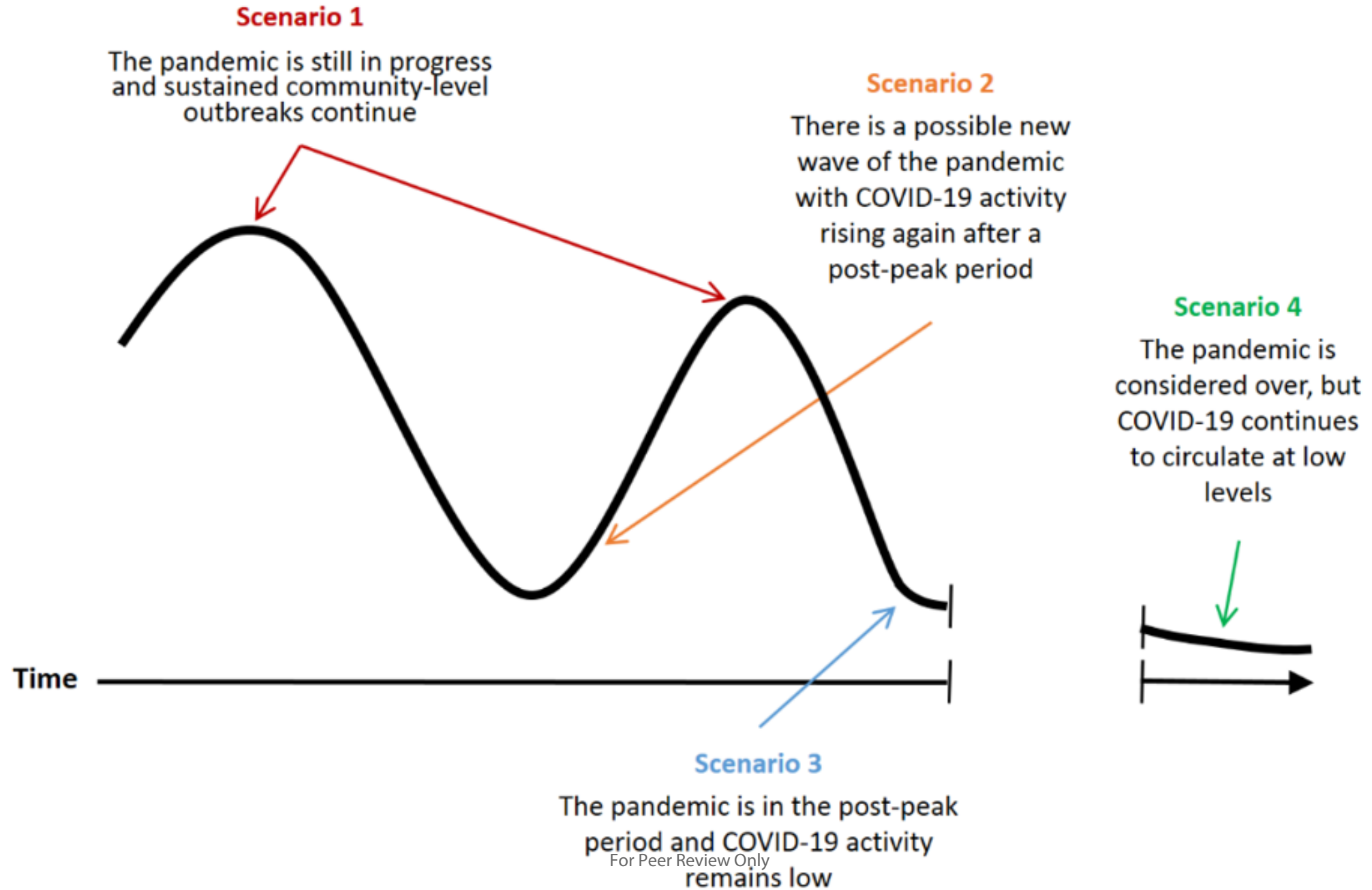
* These stakeholders each provided individual expert responses.

** These stakeholders each provided a single response on behalf of their organisation or jurisdiction.

Confidential

Table 3. Average (mean, median, and mode) rankings for COVID-19 pandemic immunisation strategies for different pandemic scenarios at the time of initial COVID-19 vaccine availability

	COVID-19 pandemic immunisation strategies			
	Protect those who are most vulnerable to severe illness and death from COVID-19	Minimise transmission of COVID-19 disease	Protect critical infrastructure	Protect healthcare capacity
Scenario 1: The pandemic is still in progress and sustained community-level COVID-19 outbreaks continue.				
Mean	1.7	2.9	3.3	2.2
Median	1	3	4	2
Mode	1	4	4	2
Scenario 2: There is a possible new wave of the pandemic with COVID-19 activity rising again after a post-peak period.				
Mean	1.7	2.7	3.4	2.3
Median	1	3	4	2
Mode	1	4	4	2
Scenario 3: The pandemic is in the post-peak period and COVID-19 activity remains low.				
Mean	1.4	2.7	3.4	2.6
Median	1	2	4	3
Mode	1	2	4	3
Scenario 4A: The pandemic is considered over, but COVID-19 continues to circulate at low levels. There is evidence that the vaccine (or previous infection) provides long-term protection against COVID-19, but a routine vaccination program may be required for new cohorts that are immunologically naïve.				
Mean	1.3	2.9	3.4	2.6
Median	1	3	4	3
Mode	1	2	4	2
Scenario 4B: The pandemic is considered over, but COVID-19 continues to circulate at low levels. There is evidence that the vaccine (or previous infection) does not provide long-term protection against COVID-19 and a routine vaccination program will be required for much of the population.				
Mean	1.6	2.8	3.4	2.3
Median	1	3	4	2
Mode	1	4	4	2





(le français suit)

Dear [REDACTED],

The Public Health Agency of Canada is requesting your input as a member of [REDACTED] on novel coronavirus (COVID-19) immunization strategies. This information will be used for decision-making on recommended target groups for early COVID-19 vaccination when it may not be feasible to vaccinate all Canadians. Your expert perspective is critical for this work. As such, please complete the attached short survey, which should take only 5 minutes to complete.

Your completion of the survey is voluntary and will be accepted as evidence of consent to participate. The personal information you provide is governed in accordance with the *Privacy Act* and is being collected under the authority of section 4 of the Department of Health Act in accordance with the *Treasury Board Directive on Privacy Practices*. This survey only collects the information needed to conduct the research project. For more information about our privacy practices, please contact the Public Health Agency of Canada at: phac.privacy-vieprivee.aspc@canada.ca

Please be assured that your responses will be confidential; only aggregated results will be disseminated and no answers will be attributed to specific individuals. Your survey answers will be known only to the research investigators and the National Advisory Committee on Immunization, and will not be attributed to you or your organisation in published materials. The aggregated results of the survey will be submitted to a peer-reviewed medical or public health journal as part of the greater initiative to document decision-making throughout Canada's pandemic response. If you would like to receive the results of this research, please contact: phac.naci-ccni.aspc@canada.ca

Please return your completed survey to phac.naci-ccni.aspc@canada.ca as soon as possible, before [REDACTED].

Thank you for your time.

Madame, Monsieur,

L'Agence de la santé publique du Canada (ASPC) vous demande votre avis en tant que membre du [REDACTED] sur diverses stratégies de vaccination contre le nouveau coronavirus (COVID-19). Les renseignements fournis seront utilisés pour prendre des décisions concernant les groupes cibles recommandés pour la vaccination précoce contre la COVID-19 advenant qu'il ne soit pas possible de vacciner tous les Canadiens. Aux fins de ce projet, il est essentiel d'obtenir votre point de vue en tant qu'expert. Par conséquent, veuillez répondre au court questionnaire ci-joint. Cela ne devrait prendre que cinq minutes.

Votre participation à l'enquête est volontaire et constituera une preuve de votre consentement à y participer. Les renseignements personnels que vous fournirez sont visés par la *Loi sur la protection des renseignements personnels* et sont recueillis en vertu de l'article 4 de la *Loi sur le ministère de la Santé*, conformément à la *Directive du Conseil du Trésor sur les pratiques relatives à la protection de la vie privée*. La présente enquête ne recueille que les renseignements nécessaires pour mener à bien le projet de recherche. Pour obtenir plus d'information sur nos pratiques en matière de protection des

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3 renseignements personnels, veuillez communiquer avec l'ASPC à l'adresse [phac.privacy-](mailto:phac.privacy-vieprivee.aspc@canada.ca)
4 [vieprivee.aspc@canada.ca](mailto:phac.privacy-vieprivee.aspc@canada.ca).
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7 Veuillez être assuré que toutes vos réponses demeureront confidentielles; seuls les résultats agrégés
8 seront diffusés et aucune réponse ne sera associée à des personnes en particulier. Seuls les chercheurs et
9 du Comité consultatif national de l'immunisation auront connaissance de vos réponses à l'enquête, et
10 elles ne seront attribuées ni à vous ni à votre organisme dans les documents publiés. Les résultats agrégés
11 de l'enquête seront publiés dans une revue médicale ou de santé publique évaluée par des pairs dans le
12 cadre d'une initiative plus vaste visant à documenter le processus décisionnel dans le contexte de la lutte
13 contre la pandémie au Canada. Si vous souhaitez recevoir les résultats de cette enquête, veuillez envoyer
14 un courriel à l'adresse phac.naci-ccni.aspc@canada.ca.
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17 Veuillez retourner votre questionnaire dûment rempli à l'adresse phac.naci-ccni.aspc@canada.ca le plus
18 rapidement possible, avant le .
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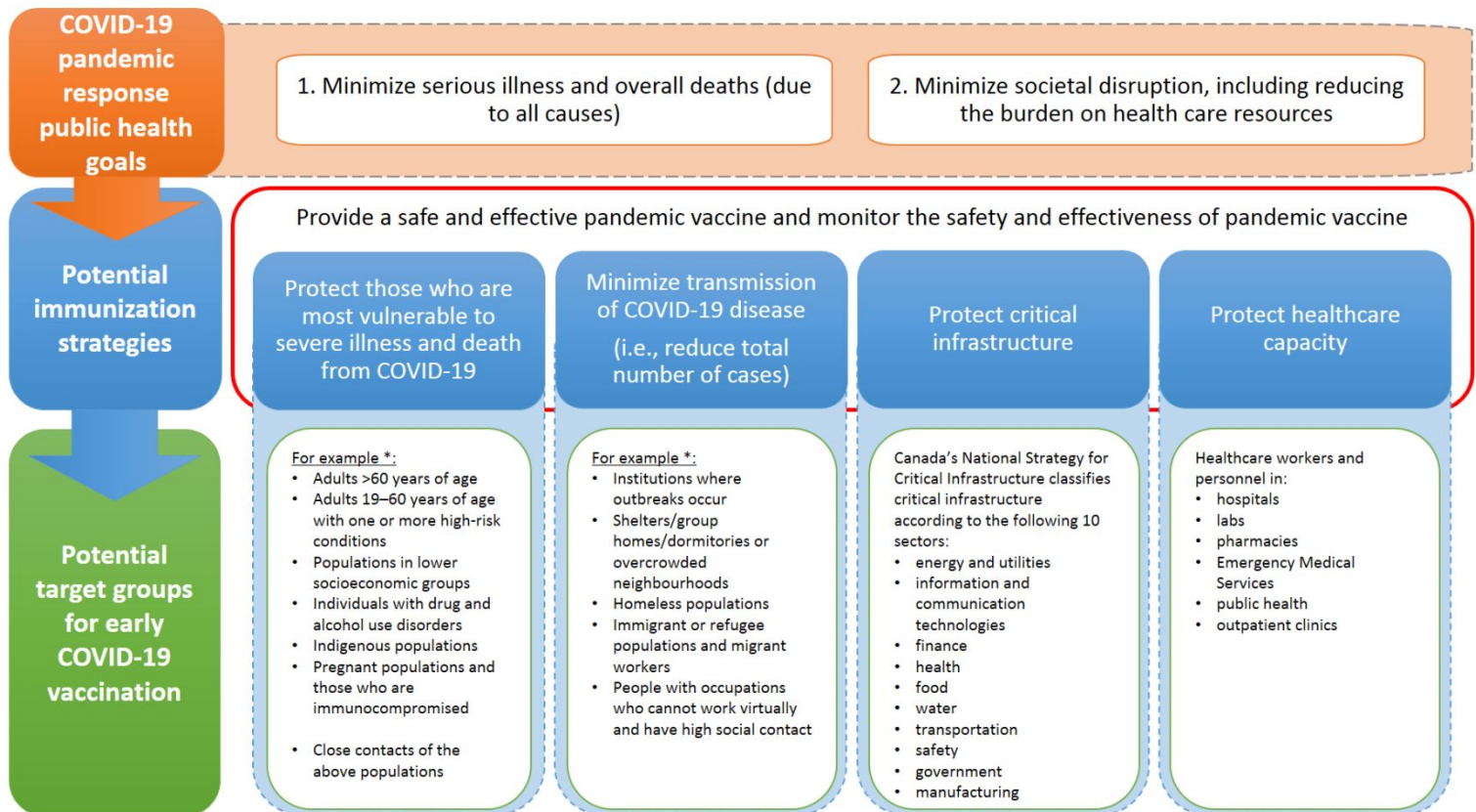
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Survey on novel coronavirus disease (COVID-19) immunization strategies

Clinical trials of candidate novel coronavirus disease (COVID-19) vaccines are currently underway. If and when a COVID-19 vaccine (or vaccines) becomes available in Canada, initial supplies are not expected to be sufficient to cover all Canadians right away. Therefore, certain groups will receive the vaccine earlier than others.

In order to plan for the efficient, effective, and equitable allocation, distribution, and administration of the eventual COVID-19 vaccine, the Public Health Agency of Canada (PHAC) is surveying various stakeholder groups to rank the relative importance of pandemic immunization strategies for targeted vaccination in different pandemic scenarios at the time of initial COVID-19 vaccine availability. The survey results will be used to inform decision-making by Canada's National Advisory Committee on Immunization (NACI) ¹ on recommended target groups for early COVID-19 vaccination when it may not be feasible to vaccinate all Canadians right away.

Canada's COVID-19 pandemic response public health goals, potential pandemic immunization strategies to best achieve these goals when it may not be feasible to vaccinate all Canadians immediately, and potential target groups for early COVID-19 vaccination under each of these strategies are presented in the figure below.



* These example target groups are based on COVID-19 disease epidemiology and may change as the evidence base for COVID-19 evolves.

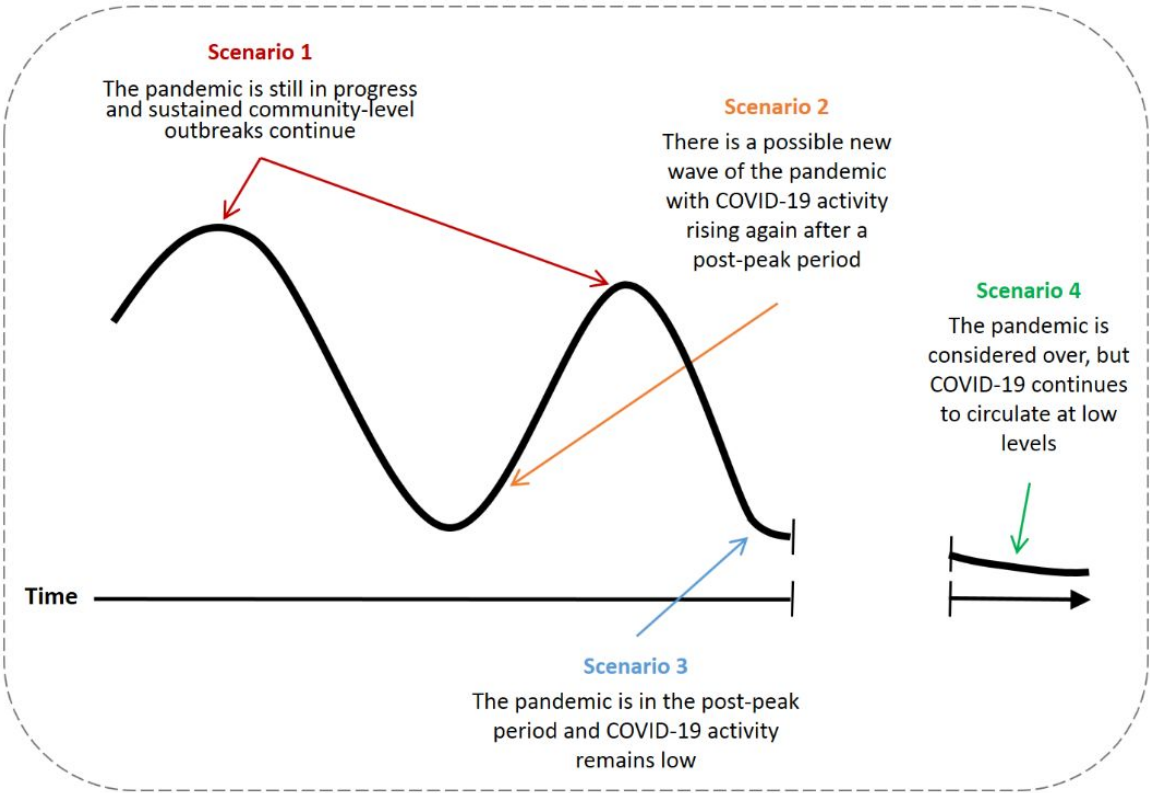
Clear pandemic immunization strategies will facilitate federal, provincial, and territorial program planning and inform federal investment and policy decisions. However, the final pandemic vaccine recommendations in Canada cannot be made until more is known about the pandemic vaccine characteristics (e.g., efficacy, safety, dosing schedule), how well the candidate vaccines work in different populations (e.g., immunocompromised, elderly), and the supply situation.

¹ NACI is an external advisory committee to PHAC that provides advice on the use of human vaccines in Canada, including pandemic vaccines.

SURVEY INSTRUCTIONS

This survey should take about 5 minutes to complete. The results of this survey will be aggregated for publication, in order to document decision-making throughout Canada’s pandemic response. No individual respondent or jurisdiction will be identified based on their responses.

This survey asks you to rank COVID-19 pandemic immunization strategies in order of importance for each of four pandemic scenarios. These scenarios are visually represented in the hypothetical epidemic curve below.



For the purposes of this survey, please assume that the vaccine is safe and efficacious for all populations.

Please provide distinct ranks in the order of importance. When choosing an item from the drop-down options for each scenario, please note that the numbers correspond to order of importance:

- 1 = most important
- 2 = important
- 3 = less important
- 4 = least important
- 5 = least important (if "other" is specified)

Written comments are welcome. If you feel an additional pandemic immunization strategy should be included, please specify it in the list of strategies and include it in the ranking of importance with the other strategies for all four pandemic scenarios.

- Survey starts on next page -

SCENARIO 1

At the time of COVID-19 vaccine availability, the pandemic is still in progress and sustained community-level COVID-19 outbreaks continue.

The COVID-19 vaccine is in limited supply. In this context, how would you rank the following COVID-19 immunization strategies in order of importance from 1 to 4 (or 5, if an additional strategy is specified), with 1 being the most important strategy?

Pandemic immunization strategy	Order of importance 1 = most important 4 (or 5, if "other" is specified) = least important
Protect those who are most vulnerable to severe illness and death from COVID-19	Choose an item.
Minimize transmission of COVID-19 disease (i.e., reduce total number of cases)	Choose an item.
Protect critical infrastructure	Choose an item.
Protect healthcare capacity	Choose an item.
Other (please specify): Click or tap here to enter text.	Choose an item.

SCENARIO 2

At the time of COVID-19 vaccine availability, there is a possible new wave of the pandemic with COVID-19 activity rising again after a post-peak period.

The COVID-19 vaccine is in limited supply. In this context, how would you rank the following COVID-19 immunization strategies in order of importance from 1 to 4 (or 5, if an additional strategy is specified), with 1 being the most important strategy?

Pandemic immunization strategy	Order of importance 1 = most important 4 (or 5, if "other" is specified) = least important
Protect those who are most vulnerable to severe illness and death from COVID-19	Choose an item.
Minimize transmission of COVID-19 disease (i.e., reduce total number of cases)	Choose an item.
Protect critical infrastructure	Choose an item.
Protect healthcare capacity	Choose an item.
Other (please specify): Click or tap here to enter text.	Choose an item.

- Survey continues on next page -

SCENARIO 3

At the time of COVID-19 vaccine availability, the pandemic is in the post-peak period and COVID-19 activity remains low.

The COVID-19 vaccine is in limited supply. In this context, how would you rank the following COVID-19 immunization strategies in order of importance from 1 to 4 (or 5, if an additional strategy is specified), with 1 being the most important strategy?

Pandemic immunization strategy	Order of importance 1 = most important 4 (or 5, if "other" is specified) = least important
Protect those who are most vulnerable to severe illness and death from COVID-19	Choose an item.
Minimize transmission of COVID-19 disease (i.e., reduce total number of cases)	Choose an item.
Protect critical infrastructure	Choose an item.
Protect healthcare capacity	Choose an item.
Other (please specify): Click or tap here to enter text.	Choose an item.

SCENARIO 4-A

At the time of COVID-19 vaccine availability, the pandemic is considered over, but COVID-19 continues to circulate at low levels. There is evidence that the vaccine (or previous infection) provides long-term protection against COVID-19, but a routine vaccination program may be required for new cohorts that are immunologically naïve.

The COVID-19 vaccine is in limited supply. In this context, how would you rank the following COVID-19 immunization strategies in order of importance from 1 to 4 (or 5, if an additional strategy is specified), with 1 being the most important strategy?

Pandemic immunization strategy	Order of importance 1 = most important 4 (or 5, if "other" is specified) = least important
Protect those who are most vulnerable to severe illness and death from COVID-19	Choose an item.
Minimize transmission of COVID-19 disease (i.e., reduce total number of cases)	Choose an item.
Protect critical infrastructure	Choose an item.
Protect healthcare capacity	Choose an item.
Other (please specify): Click or tap here to enter text.	Choose an item.

- Survey continues on next page -

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SCENARIO 4-B

At the time of COVID-19 vaccine availability, the pandemic is considered over, but COVID-19 continues to circulate at low levels. There is evidence that the vaccine (or previous infection) does not provide long-term protection against COVID-19 and a routine vaccination program will be required for much of the population.

The COVID-19 vaccine is in limited supply and immunity against COVID-19 wanes over time, necessitating re-vaccination to maintain protection. In this context, how would you rank the following COVID-19 immunization strategies in order of importance from 1 to 4 (or 5, if an additional strategy is specified), with 1 being the most important strategy?

Pandemic immunization strategy	Order of importance 1 = most important 4 (or 5, if “other” is specified) = least important
Protect those who are most vulnerable to severe illness and death from COVID-19	Choose an item.
Minimize transmission of COVID-19 disease (i.e., reduce total number of cases)	Choose an item.
Protect critical infrastructure	Choose an item.
Protect healthcare capacity	Choose an item.
Other (please specify): Click or tap here to enter text.	Choose an item.

Thank you for participating in this survey.

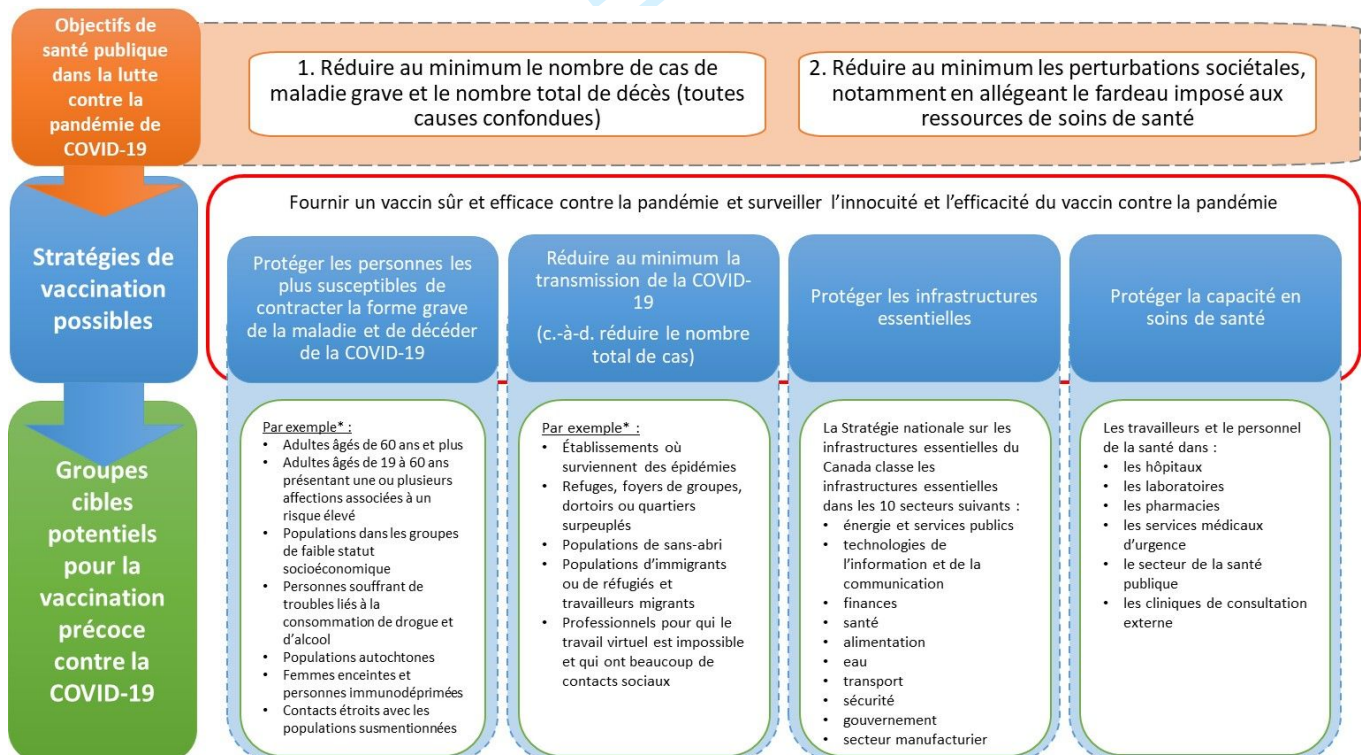
Please return the completed survey to: phac.naci-ccni.aspc@canada.ca

Enquête sur les stratégies de vaccination contre la nouvelle maladie à coronavirus (COVID-19)

Des essais cliniques portant sur des vaccins expérimentaux contre la nouvelle maladie à coronavirus (COVID-19) sont en cours. Lorsqu'un ou plusieurs vaccins contre la COVID-19 seront disponibles au Canada, le cas échéant, on s'attend à ne pas disposer dans un premier temps d'une quantité suffisante de stocks pour répondre immédiatement aux besoins de tous les Canadiens. Par conséquent, certains groupes recevront le vaccin plus tôt que d'autres.

Afin de planifier l'attribution, la distribution et l'administration efficaces et équitables d'un éventuel vaccin contre la COVID-19, l'Agence de la santé publique du Canada (ASPC) mène une enquête auprès de divers groupes d'intervenants afin de mesurer l'importance relative de diverses stratégies de vaccination ciblée, en fonction de différents scénarios de pandémie au moment de la mise à disposition initiale du vaccin contre la COVID-19. Les résultats de l'enquête permettront au Comité consultatif national de l'immunisation (CCNI)¹ du Canada de prendre des décisions éclairées concernant les groupes cibles recommandés aux fins de la vaccination précoce contre la COVID-19 s'il n'est pas possible de vacciner tous les Canadiens immédiatement.

La figure ci-dessous présente les objectifs de santé publique du Canada dans sa lutte contre la pandémie de COVID-19, les stratégies possibles de vaccination permettant d'atteindre le plus efficacement ces objectifs advenant qu'il ne soit pas possible de vacciner immédiatement tous les Canadiens, ainsi que les groupes cibles potentiels pour une vaccination précoce contre la COVID-19 déterminés en fonction de chacune des stratégies.



* Ces exemples de groupes cibles sont fondés sur l'épidémiologie de la COVID-19 et peuvent changer en fonction de l'évolution de la base de données relatives à la COVID-19.

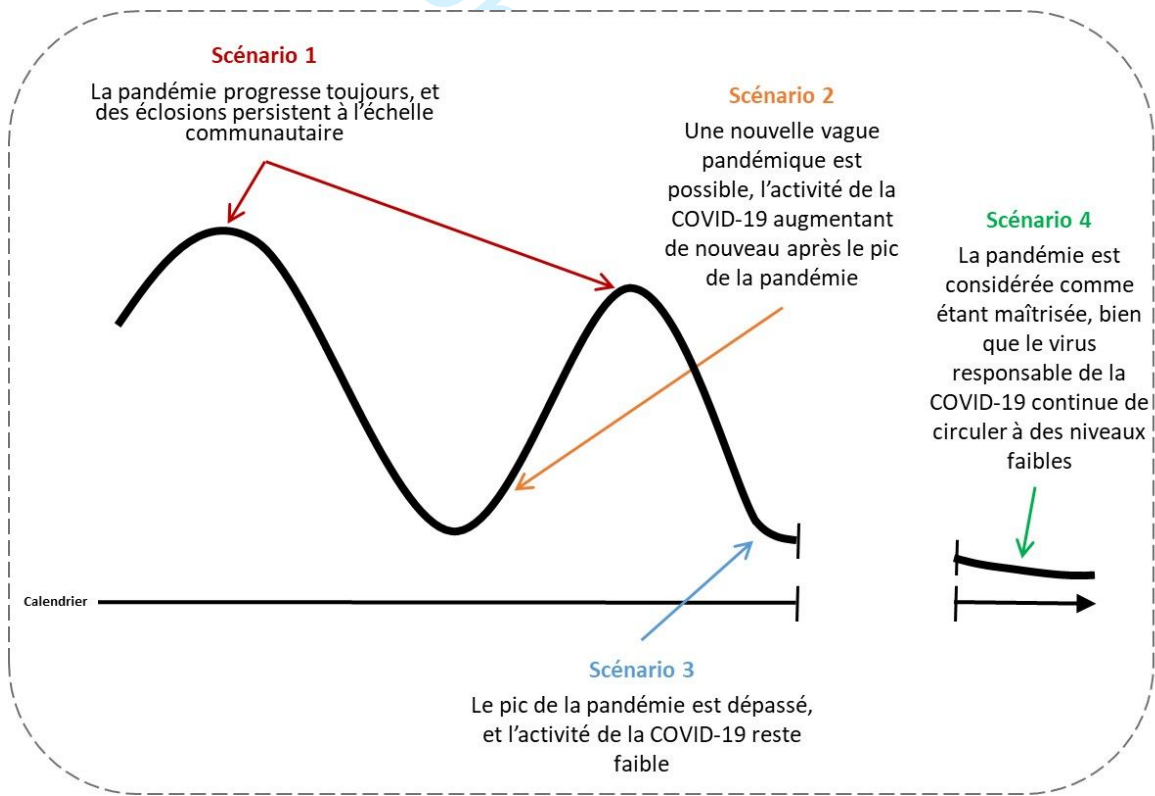
¹ Le CCNI est un comité consultatif externe de l'ASPC qui fournit des conseils sur l'utilisation de vaccins à usage humain au Canada, y compris les vaccins contre la pandémie.

Des stratégies claires de vaccination contre la COVID-19 faciliteront la planification des programmes fédéraux, provinciaux et territoriaux et éclaireront les décisions fédérales en matière d'investissement et d'orientation. Cependant, les recommandations finales en matière de vaccination contre la pandémie au Canada ne pourront être formulées que lorsqu'on en saura davantage sur les caractéristiques du vaccin contre la pandémie (par exemple l'efficacité, l'innocuité, le schéma posologique), l'efficacité des vaccins expérimentaux chez différentes populations (comme les personnes immunodéprimées ou âgées) et la situation entourant l'approvisionnement.

INSTRUCTIONS POUR RÉPONDRE À L'ENQUÊTE

Il faudra environ cinq minutes pour répondre à cette enquête. Les résultats de cette enquête seront regroupés aux fins de publication pour documenter la prise de décisions dans le contexte de la lutte contre la pandémie au Canada. Aucune personne ni aucune administration ne pourront être identifiées à partir de ses réponses.

Aux fins de cette enquête, vous devez classer les stratégies de vaccination contre la COVID-19 par ordre d'importance en fonction de chacun des quatre scénarios de pandémie. Ces scénarios sont représentés visuellement dans la courbe épidémique hypothétique apparaissant ci-dessous.



Pour les besoins de cette enquête, veuillez supposer que le vaccin est sûr et efficace pour toutes les populations.

Veillez préciser l'ordre d'importance. Lorsque vous choisissez un élément dans les options de la liste déroulante de chaque scénario, veuillez noter que les numéros correspondent à un ordre d'importance :

- 1 = le plus important
- 2 = important
- 3 = moins important
- 4 = le moins important
- 5 = le moins important (si « autre » est précisé)

Les commentaires écrits sont appréciés. Si vous croyez qu'une stratégie de vaccination supplémentaire devrait être incluse, veuillez la préciser dans la liste des stratégies et l'inclure dans le classement par ordre d'importance avec les autres stratégies applicables aux quatre scénarios de pandémie.

– L'enquête commence à la page suivante –

SCÉNARIO 1

Un vaccin contre la COVID-19 est disponible alors que la pandémie progresse toujours et que des éclosions persistent à l'échelle communautaire.

On ne dispose que de stocks limités de vaccin contre la COVID-19. Dans ce contexte, comment classeriez-vous les stratégies de vaccination suivantes contre la COVID-19 par ordre d'importance selon une échelle de 1 à 4 (ou 5, si une stratégie supplémentaire est précisée), 1 étant la stratégie la plus importante?

Stratégie de vaccination contre la COVID-19	Ordre d'importance 1 = le plus important 4 (ou 5, si « autre » est précisé) = le moins important
Protéger les personnes les plus susceptibles de contracter la forme grave de la maladie et de décéder de la COVID-19	Choisir un élément.
Réduire au minimum la transmission de la COVID-19 (c.-à-d. réduire le nombre total de cas)	Choisir un élément.
Protéger les infrastructures essentielles	Choisir un élément.
Protéger la capacité en soins de santé	Choisir un élément.
Autre (veuillez préciser) : Cliquer ou toucher ici pour insérer du texte.	Choisir un élément.

SCÉNARIO 2

Un vaccin contre la COVID-19 est disponible alors qu'une nouvelle vague pandémique est possible, l'activité de la COVID-19 augmentant de nouveau après le pic de la pandémie.

On ne dispose que de stocks limités de vaccin contre la COVID-19. Dans ce contexte, comment classeriez-vous les stratégies de vaccination suivantes contre la COVID-19 par ordre d'importance selon une échelle de 1 à 4 (ou 5, si une stratégie supplémentaire est précisée), 1 étant la stratégie la plus importante?

Stratégie de vaccination contre la COVID-19	Ordre d'importance 1 = le plus important 4 (ou 5, si « autre » est précisé) = le moins important
Protéger les personnes les plus susceptibles de contracter la forme grave de la maladie et de décéder de la COVID-19	Choisir un élément.
Réduire au minimum la transmission de la COVID-19 (c.-à-d. réduire le nombre total de cas)	Choisir un élément.
Protéger les infrastructures essentielles	Choisir un élément.
Protéger la capacité en soins de santé	Choisir un élément.
Autre (veuillez préciser) : Cliquer ou toucher ici pour insérer du texte.	Choisir un élément.

– L'enquête se poursuit à la page suivante –

SCÉNARIO 3

Un vaccin contre la COVID-19 est disponible alors que le pic de la pandémie est dépassé et que l'activité de la COVID-19 reste faible.

On ne dispose que de stocks limités de vaccin contre la COVID-19. Dans ce contexte, comment classeriez-vous les stratégies de vaccination suivantes contre la COVID-19 par ordre d'importance selon une échelle de 1 à 4 (ou 5, si une stratégie supplémentaire est précisée), 1 étant la stratégie la plus importante?

Stratégie de vaccination contre la COVID-19	Ordre d'importance 1 = le plus important 4 (ou 5, si « autre » est précisé) = le moins important
Protéger les personnes les plus susceptibles de contracter la forme grave de la maladie et de décéder de la COVID-19	Choisir un élément.
Réduire au minimum la transmission de la COVID-19 (c.-à-d. réduire le nombre total de cas)	Choisir un élément.
Protéger les infrastructures essentielles	Choisir un élément.
Protéger la capacité en soins de santé	Choisir un élément.
Autre (veuillez préciser) : Cliquer ou toucher ici pour insérer du texte.	Choisir un élément.

SCÉNARIO 4

Un vaccin contre la COVID-19 est disponible alors que la pandémie est considérée comme étant maîtrisée, bien que le virus responsable de la COVID-19 continue de circuler à des niveaux faibles. Il est prouvé que le vaccin (ou une infection antérieure) offre une protection à long terme contre la COVID-19, mais un programme de vaccination systématique pourrait cibler les nouvelles cohortes non immunisées.

On ne dispose que de stocks limités de vaccin contre la COVID-19. Dans ce contexte, comment classeriez-vous les stratégies de vaccination suivantes contre la COVID-19 par ordre d'importance selon une échelle de 1 à 4 (ou 5, si une stratégie supplémentaire est précisée), 1 étant la stratégie la plus importante?

Stratégie de vaccination contre la COVID-19	Ordre d'importance 1 = le plus important 4 (ou 5, si « autre » est précisé) = le moins important
Protéger les personnes les plus susceptibles de contracter la forme grave de la maladie et de décéder de la COVID-19	Choisir un élément.
Réduire au minimum la transmission de la COVID-19 (c.-à-d. réduire le nombre total de cas)	Choisir un élément.
Protéger les infrastructures essentielles	Choisir un élément.
Protéger la capacité en soins de santé	Choisir un élément.
Autre (veuillez préciser) : Cliquer ou toucher ici pour insérer du texte.	Choisir un élément.

– L'enquête se poursuit à la page suivante –

SCÉNARIO 4B

Un vaccin contre la COVID-19 est disponible alors que la pandémie est considérée comme étant maîtrisée, bien que le virus responsable de la COVID-19 continue de circuler à des niveaux faibles. Il est prouvé que le vaccin (ou une infection antérieure) n’offre pas une protection à long terme contre la COVID-19, et un programme de vaccination systématique devra cibler une grande partie de la population.

On ne dispose que de stocks limités de vaccin contre la COVID-19 et l’immunité contre la COVID-19 diminue au fil du temps, ce qui nécessite une nouvelle vaccination pour maintenir la protection. Dans ce contexte, comment classeriez-vous les stratégies de vaccination suivantes contre la COVID-19 par ordre d’importance selon une échelle de 1 à 4 (ou 5, si une stratégie supplémentaire est précisée), 1 étant la stratégie la plus importante?

Stratégie de vaccination contre la COVID-19	Ordre d’importance 1 = le plus important 4 (ou 5, si « autre » est précisé) = le moins important
Protéger les personnes les plus susceptibles de contracter la forme grave de la maladie et de décéder de la COVID-19	Choisir un élément.
Réduire au minimum la transmission de la COVID-19 (c.-à-d. réduire le nombre total de cas)	Choisir un élément.
Protéger les infrastructures essentielles	Choisir un élément.
Protéger la capacité en soins de santé	Choisir un élément.
Autre (veuillez préciser) : Cliquer ou toucher ici pour insérer du texte.	Choisir un élément.

Merci d’avoir répondu à ce questionnaire.

Veuillez retourner le questionnaire dûment rempli à l’adresse phac.naci-ccni.aspc@canada.ca