

EVIDENCE SYNTHESIS BRIEFING NOTE

TOPIC: STRATEGIES TO ENCOURAGE VACCINE ACCEPTANCE AND ADDRESS VACCINE HESITANCY

Information finalized as of November 17, 2020.^a

This Briefing Note was completed by the Research, Analysis, and Evaluation Branch (Ministry of Health) in collaboration with a member of the COVID-19 Evidence Synthesis Network. Please refer to the [Methods](#) section for further information.

Purpose: This briefing note summarizes strategies for encouraging vaccine acceptance and addressing vaccine hesitancy or uptake.

Key Findings:

- Research evidence suggests that vaccine acceptance is encouraged and hesitancy reduced through: 1) multi-component community-based strategies that typically include information, education, and reminder and recall interventions; and 2) the availability of vaccines through familiar and accessible locations (e.g., pharmacies).
- Effective interventions targeting specific population groups include:
 - **General Public:** Effective interventions include those that are community-based (e.g., educational resources such as brochures and posters, home visits, technology-based health literacy, monetary incentives), reminder and recall systems (e.g., telephone calls), and pharmacy-based. Global surveys reported several facilitators for uptake of a COVID-19 vaccine, including political support, high levels of trust in information from government sources, and messages emphasizing personal health risks and collective health consequences of not vaccinating.
 - **Parents and Children:** To promote vaccine uptake in children, parents benefit from access to balanced and accessible information about harms and risks, as they may find it difficult to know which information sources to trust. Parents tend to view health workers as important sources of information, but poor communication and negative relationships can impact vaccination decisions.
 - **Older Adults:** Reminder and recall systems (e.g., personalized phone calls), pharmacist-provided education, nurse-provided vaccinations, home visits, and free vaccination programs may be effective.
 - **People Who Are Hesitant/Opposed to Vaccination:** Setting up vaccination clinics in familiar and accessible locations and leveraging community partners for reach-out may be effective.
- Expert recommendations to address vaccine hesitancy and improve vaccine uptake include public education and transparency, decentralized and convenient locations for vaccination that build upon existing vaccination programs, ethical vaccine allocation, accountability for reporting misinformation, intersectoral partnerships, and health provider training.
- Canada (including Ontario), Australia, China, New Zealand, the United Kingdom, and the United States have launched vaccination campaigns through common modalities (e.g., in-person, television, social media), engaged health providers to provide information and address concerns during clinic visits, and combatted misinformation through community engagement and transparency.

Implementation Implications: Multi-component interventions that focus on information or education provision, behaviour-change support, and skills and competencies development are likely to encourage vaccine acceptance and uptake.

^a This briefing note includes current available evidence as of the noted date. It is not intended to be an exhaustive analysis, and other relevant findings may have been reported since completion.

Supporting Evidence

[Table 1](#) below summarizes the scientific evidence and jurisdictional experiences regarding strategies to encourage vaccine acceptance and address vaccine hesitancy or uptake. Jurisdictions reviewed include Canada, Australia, China, New Zealand, the United Kingdom (UK), and the United States (US). Most of these sources do not address a COVID-19 vaccine specifically; COVID-19-related information is included where available.

Additional details are provided in the Appendix: [Table 2](#) (for detailed findings extracted from highly relevant evidence documents for encouraging vaccine acceptance and addressing vaccine hesitancy among different target population groups), [Table 3](#) (for experiences from other countries with encouraging vaccine acceptance and addressing vaccine hesitancy), and [Table 4](#) (for experiences from Canadian jurisdictions with encouraging vaccine acceptance and addressing vaccine hesitancy).

Table 1: Scientific Evidence, Expert Guidance, and Jurisdictional Experiences for Strategies to Encourage Vaccine Acceptance and Address Vaccine Hesitancy

<p>Scientific Evidence and Expert Guidance</p>	<ul style="list-style-type: none"> • Research Findings: Overall, research suggests that vaccine acceptance is encouraged and hesitancy reduced through: 1) multi-component community-based strategies that typically include information, education, and reminder and recall interventions; and 2) availability of vaccines through familiar and accessible locations (e.g., pharmacies). Key findings related to interventions targeting different population groups include: <ul style="list-style-type: none"> ○ General Public: <ul style="list-style-type: none"> ▪ Community-Based Interventions: Two systematic reviews found that community-based interventions using informational or educational resources (e.g., brochures, pamphlets, posters) improves attitudes about vaccines. Other effective interventions may include home visits, technology-based health literacy, and monetary incentives. Another systematic review suggested that: 1) resource-intensive interventions (e.g., manual outreach, tracking, home visits) may be necessary strategies to increase vaccination rates amongst populations who typically have low rates of vaccination; and 2) costs could be reduced if interventions are implemented in a stepped approach, starting with less resource-intensive interventions (e.g., reminder and recall systems) and progressing to other interventions if needed. ▪ Reminder and Recall Interventions: A systematic review found that reminding people (e.g., by telephone and automatic calls, sending a letter or postcard, sending a text message) to get a vaccination likely increases the number of people who receive vaccines. Reminding people over the telephone may be more effective than other types of reminders. ▪ Pharmacy-Based Interventions: A systematic review found an increase in vaccine coverage when pharmacists were involved in the immunization process, regardless of the role (e.g., educator, facilitator, administrator) or vaccine administered (e.g., influenza, pneumococcal) when compared to vaccine provision by traditional providers without pharmacist involvement. Convenience and accessibility (e.g., extended hours, availability of walk-in appointments) of pharmacies are important facilitators of immunization acceptance and uptake, but political and organizational barriers may limit the feasibility and effectiveness of pharmacies for sites of vaccination.
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	<ul style="list-style-type: none"> ▪ Facilitators for COVID-19 Vaccine Uptake: A global survey (October 2020) of 13,426 people in 19 countries found that respondents that reported higher levels of trust in information from government sources were more likely to accept a vaccine and take their employer's vaccine advice. One survey from the US found that: 1) messages that emphasize personal health risks and collective health consequences of not vaccinating significantly increased intentions to vaccinate; 2) the effects were similar regardless of the message source (ordinary people or medical experts) and efforts to pre-emptively de-bunk concerns about the safety of expedited clinical trials; and 3) the 'economic cost' related framing had no discernible effect on vaccine intentions. Another US survey found that public opinion toward COVID-19 vaccinations may be responsive to political motivation and support, with findings highlighting that positive statements by President Donald Trump and Dr. Anthony Fauci had a significant positive effect on public reactions towards a COVID-19 vaccine. ○ Parents and Children: In terms of facilitators for vaccine uptake in children, a systematic review found that parents: 1) want balanced information about harms and risks that is accessible (not just in health settings) and clearly presented in advance of a vaccination appointment; 2) view health workers as an important source of information, but poor communication and negative relationships can impact vaccination decisions; and 3) find it difficult to know which information sources to trust and/or find unbiased and balanced information. ○ Older Adults: A systematic review indicated that several interventions were found to be effective for increasing demand for vaccination among community-dwelling older adults, including reminder/recalls by letters and leaflets, pharmacist-provided education, nurse-provided vaccinations, personalized phone calls, home visits, client group clinic visits, and free vaccination programs. ○ People Who are Hesitant/Opposed to Vaccination: A systematic review found that the attitude of parents who are hesitant about vaccines substantially improved after receiving educational resources and information (e.g., brochures, pamphlets, posters). Additionally, a rapid review reported that vaccine uptake may be improved by setting up vaccination clinics in familiar and accessible locations and leveraging community partners to reach individuals who are hesitant about or opposed to vaccination. ● Expert Recommendations: <ul style="list-style-type: none"> ○ Two guidelines from the World Health Organization (WHO) provided general insights about vaccine delivery, but also described specific steps for ministries of health to encourage vaccine acceptance and address vaccine hesitancy. The Vaccine Introduction Readiness Assessment Tool includes information on establishing data systems to collect social-media misinformation and behavioural data. ○ A rapid review from the UK's national academy of sciences, The Royal Society, published five key recommendations to address vaccine hesitancy and improve vaccine uptake: 1) public dialogue about vaccine concerns and misinformation; 2) convenient locations for vaccination that build on existing vaccination programs; 3) decentralized local vaccination programs with visually appealing, multi-language toolkits for local jurisdictions and partners; 4) ethical allocation of vaccines by prioritizing age and comorbidity-based groups; and 5) accountability from media and responsibility from citizens to report misinformation and remove harmful information.
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	<ul style="list-style-type: none"> ○ The expert opinion of a 23-member Working Group of Readyng Populations for COVID-19 recommended that governments should: 1) value social science, generate research on social, behavioural, and communication science, and develop active partnerships; 2) inform public expectations about COVID-19 vaccination benefits, risks, and supply (e.g., temper expectations, be transparent about vaccine-safety systems, seek input from marginalized populations); 3) communicate in meaningful ways (e.g., reject political tensions, conduct qualitative studies to understand local and community needs and attitudes, engage networks of trusted champions and spokespeople to deliver a unified message); 4) earn public trust and confidence in allocation and distribution (e.g., develop strategies that take marginalized populations into consideration, implement guidelines that are consistent across providers and locations); 5) make vaccination available in safe, familiar places (e.g., schools, pharmacies, places of worship, workplaces, health departments, senior centres, home visits), prepare educational materials, train providers and other allied professionals, develop hesitancy campaign plans, and foster intersectoral partnerships with government, health departments and media); and 6) establish an independent body to instil public ownership (e.g., establish public committees to report on measures such as public understanding, access, and acceptance).
<p>International Scan</p>	<ul style="list-style-type: none"> ● General Population-Based Interventions: Australia, China, New Zealand, the UK, and the US generally reported efforts to encourage vaccine acceptance and address vaccine hesitancy through existing population-based interventions, which include: <ul style="list-style-type: none"> ○ Launching vaccination campaigns with an emphasis on the importance of vaccination; ○ Providing tailored information to describe evidence on the risks and benefits of vaccines through common modalities (e.g., radio/podcasts, television, email alerts and reminders, text messages, face-to-face, social media) and through less frequently mentioned modalities (e.g., financial incentives, reminder-recall notifications); ○ Engaging health care providers to provide information and address concerns from vaccine-hesitant individuals during clinic visits; and ○ Combating myths and misinformation about vaccines through community engagement and transparency of the vaccine development process. ● COVID-19-Specific Interventions: The US Department of Health and Human Services' National Vaccine Advisory Committee released five recommendations to build confidence on the vaccine, which outline the need to: <ul style="list-style-type: none"> ○ Deliver effective COVID-19 vaccines to the public through the Food and Drug Administration's Biologics License Application process; ○ Rapidly deploy and coordinate vaccine safety monitoring through the federal-level immunization task force; ○ Create proactive and highly impactful communication for the general public on the development, safety, approval, and recommendation criteria; ○ Establish an independent group of vaccine and public health experts to conduct rapid reviews of available vaccine safety monitoring data; and ○ Conduct community-based studies and engagement to increase the likelihood of vaccine uptake in communities and marginalized populations.
<p>Canadian Scan</p>	<ul style="list-style-type: none"> ● Expert Recommendations: There is existing guidance to encourage vaccine acceptance and help address vaccine hesitancy for the general public, such as strategies outlined by the Public Health Agency of Canada, Canadian Vaccination Evidence Resource and Exchange Centre (CANVax), and the Canadian Pediatric Society. For example:

	<ul style="list-style-type: none"> ○ A Public Health Agency of Canada report (2016) described engagement strategies. For vaccine acceptors, strategies include encouraging resiliency, describing common side effects and rare adverse events, and using verbal and numeric descriptions of disease risks. For those who are vaccine hesitant, key strategies include building rapport and accepting questions and concerns, establishing honest dialogue with information about risk and benefits of the disease and vaccine, using decision aids and other information tools, and providing the opportunity to book additional appointments with health care providers for further discussion. Lastly, for those who refuse vaccines, strategies include avoiding debates about vaccination, providing opportunities for brief open-ended discussions, providing information about the risks of non-vaccination, and offering access to clinical care during adverse events. ○ A presentation (January 24, 2020) from the Vaccine Evaluation Centre at the University of British Columbia provided recommendations for health care providers to improve vaccine hesitancy, which includes maintaining trust, reinforcing the role of community immunity, emphasizing pro-social reasons for vaccination, and acknowledging diversity by working with culturally specific health promotion groups and patient/parent communities. ● General Population-Based Interventions: All Canadian provinces and territories reported strategies to encourage immunization among the general population, which were often cited within flu-vaccination campaigns. The most-reported strategy included information or education campaigns on social media, including web-based advertising to address hesitancy, fact sheets about the risks and benefits, and information on immunization schedules and where to get their vaccine. For example, Yukon’s 2020 influenza vaccine campaign featured public education and engagement through YouTube, and explained key vaccination dates, provided information on COVID-19, and addressed vaccine hesitancy.
Ontario Scan	<ul style="list-style-type: none"> ● The Government of Ontario’s Fall Preparedness Plan for Health, Long-Term Care and Education states that there are actions underway to engage with stakeholders to promote the flu vaccine and run a public-education and targeted flu campaign. ● Prior to the COVID-19 pandemic, the Ontario Medical Association launched the #AskOntarioDoctors social media and public information campaign to combat vaccine misinformation and hesitancy.

Methods

The COVID-19 Evidence Synthesis Network is comprised of groups specializing in evidence synthesis and knowledge translation. The group has committed to provide their expertise to provide high-quality, relevant, and timely synthesized research evidence about COVID-19 to inform decision-makers as the pandemic continues. The following member of the Network provided an evidence synthesis product that was used to develop this Evidence Synthesis Briefing Note:

- Gauvin FP, Lavis JN. [COVID-19 rapid evidence profile #24: What is known about strategies for encouraging vaccine acceptance and addressing vaccine hesitancy \(including efforts to combat misinformation that may lead to vaccine hesitancy\) or uptake \(when interpreted, at least in part, through the perspective of vaccine acceptance or hesitancy\)?](#) Hamilton: McMaster Health Forum, 17 November 2020.

For more information, please contact the [Research, Analysis and Evaluation Branch \(Ministry of Health\)](#).

APPENDIX

The following tables are from an evidence synthesis product produced by a member of the COVID-19 Evidence Synthesis Network:

- Gauvin FP, Lavis JN. [COVID-19 rapid evidence profile #24: What is known about strategies for encouraging vaccine acceptance and addressing vaccine hesitancy \(including efforts to combat misinformation that may lead to vaccine hesitancy\) or uptake \(when interpreted, at least in part, through the perspective of vaccine acceptance or hesitancy\)?](#) Hamilton: McMaster Health Forum, 17 November 2020.

Table 2: Key Findings from Highly Relevant Evidence Documents for Encouraging Vaccine Acceptance and Addressing Vaccine Hesitancy Among Different Target Groups

Target Group	Key Findings from Highly Relevant Evidence Documents
<p>General public only</p>	<p><i>Key findings from full systematic reviews</i></p> <ul style="list-style-type: none"> • A review of the effects of different types of patient reminder and recall interventions to improve vaccination rates found that reminding people to get a vaccination likely increases the number of people who receive vaccination rates by an average of 8%; and reminding people by telephone and automatic calls, sending a letter or postcard, or sending a text message each increase vaccination rates, but reminding people over the telephone is more effective than other types of reminders (Source; AMSTAR rating 9/11; literature last search 2017) • An increase in vaccine coverage was found when pharmacists were involved in the immunization process, regardless of role (e.g., educator, facilitator, administrator) or vaccine administered (e.g., influenza, pneumococcal), when compared to vaccine provision by traditional providers without pharmacist involvement (Source; AMSTAR rating 10/11; literature last searched 2015) • Vaccine attitude, parents' attitude towards vaccines substantially improved in eight of 15 studies after receiving educational resources and information, such as brochures, pamphlets, or posters (Source; AMSTAR rating 8/10; literature last searched September 2012) • Increased vaccine acceptance and uptake was found following community-based interventions (most of which were targeted at parents or caregivers of children and using home visits and/or information campaigns through community health works and medical interns); monetary incentives (which had a moderate impact on alleviating financial burden in low-income settings); and technology-based health literacy (Source; AMSTAR rating 5/9; literature last searched August 2019 – pre-print) • A review of the feasibility, acceptability, and effectiveness of community pharmacies as sites for adult vaccination found that: pharmacy-based immunization services are widely accepted by both patients and pharmacy staff; pharmacies may improve access and increase vaccination rates; and political and organizational barriers may limit the feasibility and effectiveness of pharmacies for sites of adult vaccination (Source; AMSTAR rating 7/9; literature last searched 2016) • A synthesis of qualitative studies found that parents: <ul style="list-style-type: none"> ○ Expressed wanting balanced information about vaccination benefits and harms that is presented clearly and simply and tailored to their situation and that that they want vaccination information to be available at a wide variety of locations (not just in health settings) and with access to information provided well in advance before the time of a vaccination appointment ○ View health workers as an important source of information, but that poor communication and negative relationships with health workers can impact vaccination decisions ○ Find it difficult to know which vaccination information sources to trust and challenging to find unbiased and balanced information, and that parents who are vaccine hesitant want more information

Target Group	Key Findings from Highly Relevant Evidence Documents
	<ul style="list-style-type: none"> ○ Most of the included interventions addressed at least one or two key aspects of communication, including the provision of information prior to a vaccination appointment and tailoring information to parents' needs, but none of the interventions responded to negative media stories or address parental perceptions of health worker motives (Source; AMSTAR rating 7/9; literature last searched August 2013) ● There is strong evidence for the use of community-based interventions (implemented in combinations) to increase vaccination rates, but many interventions (e.g., community-based interventions using manual outreach, tracking or home visits were more costly than interventions without these components) are resource-intensive, and the review suggested that: 1) resource-intensive interventions may be necessary strategies to increase vaccination rates amongst populations who typically have low rates of vaccination; and 2) costs could be reduced interventions are implemented in a stepped approach, starting with less resource-intensive interventions (e.g., reminder and recall systems) and progressing to other interventions in a strategic manner if needed (Source; AMSTAR rating 3/10; literature last searched May 2012) <p><i>Key findings from single studies</i></p> <ul style="list-style-type: none"> ● An analysis of how timing and elite endorsement affects public opinion about COVID-19 vaccines in the United States found that public opinion toward COVID-19 vaccinations may be responsive to political motivation and support, with findings highlighting that positive statements by President Trump and Dr. Fauci had a significant positive effect on public reactions towards COVID-19 vaccine (Source; pre-print - last edited 28 October 2020) ● A global survey (13,426 people in 19 countries) found that respondents reporting higher levels of trust in information from government sources were more likely to accept a vaccine and take their employer's vaccine advice (Source; published 20 October 2020) ● A survey that randomly assigned 7,064 respondents in the United States to read pro-vaccine communication materials with information emphasizing personal health risks, economic costs or collective public-health consequences of not vaccinating that had the message source (ordinary people or medical experts) also randomly assigned found that: 1) messages that emphasize personal-health risks and collective health consequences of not vaccinating were found significantly increase intentions to vaccinate; 2) the effects were similar regardless of the message source and efforts to pre-emptively de-bunk concerns about safety of expedited clinical trials; and 3) economic cost frames were found to have no discernible effect on vaccine intentions (Source; last updated 8 September 2020 - pre-print)
<p>High-risk groups only (e.g., those who are older, have chronic conditions, are immunocompromised, and have greater exposure due to living and/or working conditions)</p>	<p><i>Key findings from full systematic reviews</i></p> <ul style="list-style-type: none"> ● Several interventions were found to be effective increasing demand for vaccination among community dwelling older adults, including reminder/recalls by letters and leaflets, pharmacist-provided education, nurse-provided vaccinations, personalized phone calls, home visits, client group clinic visits, and free vaccination programs (Source; AMSTAR rating 9/11; literature last searched 7 December 2017)
<p>Individuals who are hesitant about or opposed to vaccination</p>	<p><i>Key findings from full systematic reviews</i></p> <ul style="list-style-type: none"> ● Attitude of parents who are hesitant towards vaccines substantially improved after receiving educational resources and information, such as brochures, pamphlets, or posters (Source; AMSTAR rating 8/10; last literature searched September 2012) <p><i>Key findings from rapid reviews</i></p> <ul style="list-style-type: none"> ● Vaccine uptake among hard-to-reach groups may be improved by setting up vaccination sites in familiar and accessible locations, and leveraging community partnerships (Source; AMSTAR rating 3/9; date of literature search not reported – published 27 August 2020)
<p>More than one of the above target groups</p>	<p><i>Key findings from guidelines developed using a robust process</i></p> <ul style="list-style-type: none"> ● WHO produced guidance and steps to develop a plan to generate COVID-19 vaccine confidence, acceptance and demand (WHO technical guidance; last update 21 September 2020) ● WHO developed a COVID-19 Vaccine Introduction Readiness Assessment Tool (VIRAT), which includes information on establishing data collection systems for social media misinformation and behavioural data (WHO technical guidance; last update 21 September 2020)

Target Group	Key Findings from Highly Relevant Evidence Documents
	<p><i>Key findings from rapid reviews</i></p> <ul style="list-style-type: none"> • The Royal Society, U.K.'s national academy of sciences, published five key recommendations to address vaccine hesitancy and improve vaccine uptake (Source; AMSTAR rating 2/9; data of literature search October 2020) <p><i>Key findings from guidelines developed using some type of evidence synthesis and/or expert opinion</i></p> <ul style="list-style-type: none"> • The U.S. Working Group on Readyng Populations for COVID-19 vaccine released a set of recommendations to improve vaccine acceptance and address hesitancy, which includes valuing social science, informing public expectations about COVID-19 vaccination risks, benefits, and supply, communicating in meaningful ways, earning public trust and confidence, making vaccination available in safe, familiar places, and establishing independent body to instil public ownership and monitoring (Johns Hopkins Center for Health Security and Texas State University Department of Anthropology; published 20 October 2020)

Table 3: Experiences in Other Countries with Encouraging Vaccine Acceptance and Addressing Vaccine Hesitancy

Country	Efforts to Encourage Vaccine Acceptance and to Address Vaccine Hesitancy
Australia	<ul style="list-style-type: none"> • Get the Facts campaign, which launched in 2020, is the third phase of the Childhood Immunization Education Campaign to encourage families to get their children vaccinated on time • The Australian Government Department of Health website outlines the importance of vaccinating children on time and the rationale behind the vaccination schedule • Services Australia offers an online and mobile app called Medicare to check your child's immunization history • The Melbourne Vaccine Education Centre produces podcasts that address common questions about vaccines, as well as vaccine experts discussing the benefits of immunization for children and adults • The 2020 influenza prevention campaign raises awareness about the influenza vaccination, with the core objective being to increase influenza vaccination rates, raise awareness about the risks associated with contracting the virus as well as the potential risk of contracting influenza and COVID-19 at the same time • Promotional materials include television commercials that ask viewers to protect themselves and others by getting vaccinated
China (hyperlinks in Chinese)	<ul style="list-style-type: none"> • China has a planned prophylactic vaccination system, and implemented a vaccination certificate system for children, and children's vaccination certificates/cards need to be reviewed before admissions to school • The China National Immunization Programme is a government and academic organization, with the overall goal to control/eliminate/eradicate vaccine-preventable diseases in China by raising awareness about the benefits of immunization and promoting the understanding and use of vaccines • As a member of the WHO-led project Vaccine Safety Net (VSN), information targeting the public and health professionals is available to provide vaccination-related documents and promotional materials, such as fact sheets, multimedia (video, posters), training and educational materials, regulatory documents, frequently asked questions and answers • In 2016, China's government issued vaccination regulations and recommended providing vaccination information through multiple approaches (face-to-face, phone calls, text messages, emails, broadcast, posters and social media) • On 14 September of 2020, China's government recommended taking the following measures to improve vaccine uptake for the prevention and control of influenza: <ul style="list-style-type: none"> ○ Providing influenza vaccine reminders to raise public awareness ○ Increasing the number of vaccination sites and locations in primary care ○ Starting vaccination program early ○ Extending vaccination schedule ○ Increasing daily service time for vaccination ○ Encouraging centralized vaccination in schools, kindergartens, and nursing homes • Reducing influenza vaccine fees for high-risk groups (children, older adults, people with chronic conditions, and healthcare professionals)
New Zealand	<ul style="list-style-type: none"> • New Zealand's Immunization Handbook provides advice to healthcare providers on dealing with vaccine-hesitant individuals • Effective communication and active listening are highlighted as key components of the informed-consent process when working with this group <ul style="list-style-type: none"> ○ Providers are advised to tailor the content of the conversation to the needs of the individual, use plain language rather than medical jargon, ensure respect and acknowledgement of individuals' concerns, and finish with an effective immunization recommendation • The New Zealand Covid-19 Vaccine Strategy has a focus on securing vaccines but does not address communication efforts to increase COVID-19 vaccine uptake
United Kingdom	<ul style="list-style-type: none"> • The European Centre for Disease Prevention and Control released a technical report on interventions to address vaccine hesitancy <ul style="list-style-type: none"> ○ The interventions responding to vaccine hesitancy were based on dialogue, communication, information tools for parents or healthcare workers, advocacy campaigns, and reminder-recall systems

Country	Efforts to Encourage Vaccine Acceptance and to Address Vaccine Hesitancy
	<ul style="list-style-type: none"> • The United Kingdom Department for International Development created a guidance document to address vaccine hesitancy • Interventions to reduce vaccine refusal and hesitancy included leader involvement, mass media and social-media campaigns, training for healthcare workers, financial incentives, and reminder-recall notification
United States	<ul style="list-style-type: none"> • On 16 September 2020, the Departments of Health and Human Services and Defense released the Operation Warp Speed COVID-19 Vaccine Distribution Strategy which included a primary task of engaging with partners, stakeholders, and the public to promote vaccine confidence and uptake • On 23 September 2020 the Department of Health & Human Services' National Vaccine Advisory Committee released a letter to the Assistant Secretary for Health with the following five recommendations for building confidence in a COVID-19 vaccine: <ul style="list-style-type: none"> ○ Deliver effective COVID-19 vaccines to the public through the Food and Drug Administration's Biologics License Application (BLA) process ○ Rapidly deploy and coordinate vaccine safety monitoring at the federal-level immunization task force ○ Create proactive and highly impactful communication on the development, safety, approval, and recommendation criteria geared towards the public ○ Establish an independent group of vaccine and public health experts to conduct rapid reviews of available monitoring data ○ Conduct community-based studies and engagement to increase the likelihood of vaccine uptake in communities and marginalized populations • The Department of Health & Human Services' National Vaccine Advisory Committee operates a Vaccine Confidence Subcommittee tasked with synthesizing evidence about vaccine confidence and making recommendations The Department of Health & Human Services' Office of Infectious Disease and HIV/AIDS Policy vaccine confidence strategy includes three pillars for increasing vaccine confidence across the life course: <ul style="list-style-type: none"> ○ Collaboration and partnerships ○ Research and evaluation ○ Communication strategies and knowledge dissemination • The Centers for Disease Control and Prevention's Vaccinate with Confidence framework aims to strengthen vaccine confidence and prevent outbreaks of vaccine-preventable diseases by advancing three pillars: <ul style="list-style-type: none"> ○ Identifying and protecting communities at risk ○ Empowering families by strengthening parent-provider conversations about vaccines ○ Engaging with stakeholders to contain and responds to the spread of misinformation and myths about vaccines • The Centers for Disease Control and Prevention maintains a webpage dedicated to providing information about vaccine safety, common questions, and other resources for general and specific populations (specifically, ethnic and racial groups; immigrants and refugees; and Spanish-speaking individuals)

Table 4: Experiences in Canada with Encouraging Vaccine Acceptance and Addressing Vaccine Hesitancy

Province/Territory	Efforts to Encourage Vaccine Acceptance and to Address Vaccine Hesitancy
<p>Pan-Canadian</p>	<ul style="list-style-type: none"> • A 2016 Public Health Agency of Canada report described strategies for three different population groups (vaccine acceptors, vaccine hesitant, and vaccine refusers) <ul style="list-style-type: none"> ○ Strategies for vaccine acceptors include encouraging resiliency, describing common side effects and rare adverse events, and using verbal and numeric descriptions of disease risks ○ Strategies for individuals who are vaccine hesitant include building rapport and accepting questions and concerns, establishing honest dialogue with information about risk and benefits of the disease and vaccine, utilizing decision aids and other information tools, and booking appointments for additional discussions ○ Strategies for vaccine refusers include avoiding debates about vaccination, providing opportunities for brief open-ended discussions, informing risks about non-vaccination, and offering access to clinical care during adverse events • Canadian guidance on addressing vaccine hesitancy to help foster vaccine demand and acceptance, includes strategies to detect vaccine hesitancy, skills to recognize and diagnose underlying factors in refusal or delay in vaccine acceptance, a guide to tailoring immunization program, strategies to address hesitancy and help foster demand, and steps to monitor and evaluate programmes addressing vaccine hesitancy The Canadian Paediatric Society created a guidance document for provincial/territorial immunization programs, clinics and office practices on how to address hesitancy and improve vaccine acceptance rates <ul style="list-style-type: none"> ○ Steps to addressing hesitancy included: 1) detecting under-immunized subgroups, 2) educating all healthcare workers involved with immunization best practices, 3) employing evidence-based strategies to increase uptake, 4) educating children, youth and adults on the importance of immunization, and 5) working collaboratively across provincial/territorial jurisdictions and with the governments, leaders and health services ○ Companion documents including Working with vaccine hesitant parents: An update and Canada's eight-component vaccine safety system: A primer for health care workers were also produced • A 2018 consultation study by the Canadian Immunization Research Network found that the diffusion of negative information online and lack of knowledge about vaccines were identified as the key causes of vaccine hesitancy amongst participants <ul style="list-style-type: none"> ○ Based on the study findings, the Canadian Immunization Research Network suggested that a common understanding of vaccine hesitancy among researchers, public-health experts, policymakers and healthcare providers will better guide interventions to address vaccine hesitancy in Canada • Data from Statistics Canada's Canadian Perspectives Survey found that over half (57.5%) of Canadians were very likely to get a COVID-19 vaccine when it becomes available, and 19.0% reported that they were somewhat likely to get vaccinated <ul style="list-style-type: none"> ○ Canadians were unlikely to get a COVID-19 vaccine due to a lack of confidence in the safety of the vaccine and concerns about its risk and side effects ○ Approximately one-third of Canadians who said they were unlikely to get vaccinated (34.8%) indicated that they would wait until it seems safe to get the vaccine, and 25.9% of Canadians did not consider the COVID-19 vaccine necessary
<p>British Columbia</p>	<ul style="list-style-type: none"> • A presentation entitled, Vaccine Hesitancy: It doesn't matter if the vaccine works if nobody gets it by Dr. Julie Bettinger from the Vaccine Evaluation Centre at the University of British Columbia provided recommendations for healthcare providers to improve vaccine hesitancy, which included maintaining trust, reinforcing the role of community immunity, emphasizing pro-social reasons for vaccination and acknowledging diversity by working with culturally specific health promotion groups and patient/parent communities • A 2017 survey of 1,308 adults in British Columbia found that more than 80% of respondents held positive attitudes towards vaccination <ul style="list-style-type: none"> ○ The survey also found that policies such as mandatory documentation of vaccination at school entry were supported by more than 70% of respondents and that punitive policies such as denial of child tax benefits for non-vaccination were supported by less than 40% of respondents ○ Respondents that had positive attitudes toward vaccination were also more likely to support all potential vaccination policies

Province/Territory	Efforts to Encourage Vaccine Acceptance and to Address Vaccine Hesitancy
	<ul style="list-style-type: none"> ○ The findings of this survey point to a majority of adults in British Columbia being supportive of vaccination and of information and requirement policy options to increase vaccination uptake ● A poll from Angus Reid Institute found that 30% of British Columbians would wait to see how the COVID-19 vaccine worked, or what the side effects were, before getting the vaccine
Alberta	<ul style="list-style-type: none"> ● Alberta's 2020-2021 Influenza Immunization program is focused on increasing the immunization rates for high-risk populations <ul style="list-style-type: none"> ○ Although targets for immunization of specific high-risk populations are provided, there were no strategies or objectives provided for encouraging vaccine acceptance ● Despite evidence of growing vaccine hesitancy in the province, promotion of vaccine acceptance by the government of Alberta was found to be minimal
Saskatchewan	<ul style="list-style-type: none"> ● The Saskatchewan Health Authority (SHA) is encouraging influenza uptake for the 2020-2021 season by: <ul style="list-style-type: none"> ○ Implementing a system-wide response strategy to offer the flu vaccine at every patient/client/resident encounter within the SHA ○ Promoting flu vaccination through their social media with their Twitter and Facebook cover photos (as of Nov 13, 2020) having a “Fight the Flu” theme, and with a number of posts in recent weeks focusing on the importance of flu vaccination
Manitoba	<ul style="list-style-type: none"> ● On 15 October 2020, the Premier and Chief Public Health Officer launched the ‘Add a Layer This Fall’ campaign to encourage Manitobans to get the influenza vaccine <ul style="list-style-type: none"> ○ The campaign includes an interactive map of locations with flu vaccines (including clinics, pharmacies, public health offices) with filters such as walk-in and age limitations ○ Efforts are targeted at high-risk populations and their caregivers
Ontario	<ul style="list-style-type: none"> ● The Government of Ontario’s Fall Preparedness Plan for Health, Long-Term Care and Education states that there are actions underway to engage with stakeholders to promote the flu vaccine and run a public-education and targeted flu campaign ● Prior to the COVID-19 pandemic, the Ontario Medical Association launched the #AskOntarioDoctors social-media and public-information campaign to combat vaccine misinformation and hesitancy
Quebec	<ul style="list-style-type: none"> ● The Ministry of Health in Quebec maintains a website dedicated to demystifying beliefs regarding the risks of vaccination ● A provincial program (Programme d'entretien motivationnel en maternité pour l'immunisation des enfants (EMMIE)) uses motivational interviewing during mothers’ post-partum stay in maternity wards to encourage positive attitudes towards vaccination
New Brunswick	<ul style="list-style-type: none"> ● The New Brunswick Department of Health website features a page on the importance of getting immunized, which addresses topics including how to get immunized and where to find your immunization records ● Fact sheets on the various immunizations as well as the influenza vaccine outline the benefits of each vaccine, how it is administered and who should receive it ● An immunization schedule outlining the vaccination and age it is administered is featured on the New Brunswick Department of Health website
Nova Scotia	<ul style="list-style-type: none"> ● The Nova Scotia Department of Health and Wellness website features a chart outlining the immunization schedule for children, youth and adults ● Due to school closures, Nova Scotia Health offered summer clinics for grade 7 students to receive the HPV, Hepatitis B, Tdap and Meningococcal Quadrivalent vaccines ● The Nova Scotia Department of Health and Wellness website features a page outlining the importance of protecting yourself from the flu, and a quick facts page outlines who should receive the flu shot, the symptoms of the flu and the number of doses the province has ordered this year ● The Nova Scotia Department of Health and Wellness posted an image of Health and Wellness Minister Leo Glavine on their Facebook page receiving the flu shot with the hashtag #GetTheShotNS
Prince Edward Island	<ul style="list-style-type: none"> ● The Prince Edward Island Department of Health and Wellness website features a page that outlines all childhood immunizations and adult vaccine schedules, as well as a link to download the CANImmunize app which allows people to manage their vaccination records

Province/Territory	Efforts to Encourage Vaccine Acceptance and to Address Vaccine Hesitancy
	<ul style="list-style-type: none"> • Flu shot clinics were opened earlier this year to encourage more islanders to get vaccinated • PEI Public Health Nursing is offering flu vaccination clinics at various locations across the province • A frequently asked questions page is featured on the Prince Edward Island Health and Wellness website answering questions regarding who should receive the flu vaccine and which vaccine is available this season
Newfoundland and Labrador	<ul style="list-style-type: none"> • The Newfoundland and Labrador Health and Community Services Department website features a page on immunizations outlining how children are immunized in the province as well as how to receive a copy of their immunization record, as well as fact sheets detailing information about each vaccine are available on this page and a chart outlining the vaccination schedule • A news release by Newfoundland and Labrador Health and Community Services outlines several initiatives to encourage people to get the flu shot <ul style="list-style-type: none"> ○ A new online booking tool called Health Myself was created to schedule a flu shot appointment ○ A grant is available to companies with over 100 employees to hire a qualified healthcare provider to offer a vaccination clinic within the workplace ○ School districts and private schools will be offering the flu vaccine for students in grades 4 to 12 with parental consent • The Government of Newfoundland and Labrador created a website called, Time For The Shot that outlines information about the flu shot as well as resources for employers and health care professionals
Yukon	<ul style="list-style-type: none"> • Yukon Health and Social Services created a website called Yukon Immunize, which contains: <ul style="list-style-type: none"> ○ Yukon children’s immunization schedule and information on grade 6/9 school-based immunization ○ Immunization information sheets that describe any potential side effects associated with vaccines and how to relieve them ○ Answers to common questions, including questions relating to vaccine hesitancy (e.g. that immunizations are safe, do not weaken the immune system, do not cause chronic conditions) • In April 2020, the Yukon Immunization Program (community health program) created a video about the importance of not delaying the childhood immunization schedule during COVID-19, including safety measures that are being taken to ensure that patients feel safe when attending their appointments The Yukon Immunization Program Manual (Section 1- Introduction) discusses the role of healthcare providers in delivering education about vaccines and increasing their uptake <ul style="list-style-type: none"> ○ Section 3.0 (Immunization Competency) states that the Yukon Immunization program assists all healthcare professionals who provide immunizations to be knowledgeable vaccine providers, educators and advocates ○ Section 5.0 (Relative Risks of Diseases and Immunization) addresses the shift in public and mass-media concerns toward vaccine safety, and contains guidelines for providers for communicating effectively with parents and individuals regarding the risks and benefits of immunization ○ The Immunization Communication Tool for Immunizers is approved by the Yukon Immunization Program for use by providers to help in addressing parent concerns about immunizations • The Yukon Immunization Program Manual (Section 3- Immunization Schedule) recommends that healthcare providers use each client contact as an opportunity to review their immunization status and administer all vaccines that the client is eligible for (including available vaccines that are not currently publicly funded) • Yukon's 2020 influenza vaccine campaign features public education and engagement <ul style="list-style-type: none"> ○ Yukon Health and Social Services created a video that explains key dates, COVID-19-related changes and addresses vaccine hesitancy ○ The video also asks the public to think about why they get the flu shot, which led to a follow-up video featuring community members and a Facebook campaign to engage the public
Northwest Territories	<ul style="list-style-type: none"> • The Government of Northwest Territories Health and Social Services Department (DHSS) website has an immunization/vaccination page that provides public information, including: <ul style="list-style-type: none"> ○ A poster version of its immunization schedule ○ Vaccine information sheets, which contain information about the disease, who should get the vaccine and any potential risks/reactions

Province/Territory	Efforts to Encourage Vaccine Acceptance and to Address Vaccine Hesitancy
	<ul style="list-style-type: none"> • The DHSS promotes National Immunization Awareness Week and the CANImmunize app on their website • The DHSS has a station on SoundCloud called HSS Communications that plays music with interspersed public-health messages <ul style="list-style-type: none"> ○ In 2016, there was a message titled Get Vaccinated! that was played in English, Chipewyan, Gwich'in, North Slavey, South Slavey and Tłı̨chǫ ○ The message targeted parents and spoke about the importance and safety of vaccines • The NWT COVID-19 Pandemic Planning Guide contains a communication plan that involves the DHSS, HSS Authorities and the Government of Northwest Territories Territorial Planning Committee <ul style="list-style-type: none"> ○ Though not specific to communications relating to a vaccine, it states that the DHSS is the lead on all public communications and messaging about COVID-19 during the pandemic • In January 2020, the Canadian Pediatric Society hosted a workshop in Northwest Territories which trained front-line healthcare workers on how to manage parental hesitancy to vaccines
Nunavut	<ul style="list-style-type: none"> • The Nunavut Department of Health website features a page on Influenza, which contains information about the disease and vaccine, including: <ul style="list-style-type: none"> ○ A Flu Fact Sheet, which is offered in four languages, and encourages people to get the flu vaccine to prevent infection and spread ○ A Flu Myths and Facts Sheet, which addresses numerous vaccine-related hesitancies • The Nunavut Department of Health has used public-service announcements to encourage individuals to get the flu vaccine, and to inform the public of key dates relating to vaccine delivery • Advertisements for booking flu shots and clinic information can be found on the Government of Nunavut Facebook page • The Nunavut Department of Health website features a page on childhood immunization, which contains information on immunization programs and the immunization schedule <ul style="list-style-type: none"> ○ This page also links to the Public Health Agency of Canada document A Parent's Guide to Immunization, which addresses vaccine-related hesitancies • Section 8 (Setting up Clinics) of the Government of Nunavut Immunization Manual provides strategies for healthcare providers to keep children on the immunization schedule, including assessing immunization opportunities at every clinic visit, keeping track of children in the community and educating patients and guardians on the benefits of immunization and the risks of contracting vaccine-preventable diseases • Section 8 (Setting up Clinics) of the Government of Nunavut Immunization Manual provides guidance for setting up a community immunization clinic, which are most commonly used in Nunavut for the seasonal influenza program and in pandemic situations <ul style="list-style-type: none"> ○ To increase use of the centres, the manual suggests that it is important to inform key community stakeholders of the clinic and its purpose ○ It is also suggested to have language specific signs, pamphlets and media coverage to provide accurate information on the location and purpose of the clinic