



# REPORT: AN OVERVIEW OF THE COVID-19 VACCINE ROLLOUT IN CANADA

## CURATING UNDER QUARANTINE

MAY 2021 | JENNIFER FAWCETT





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# Curating Under Quarantine Initiative

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## Project Description

Curating Under Quarantine (CuQ) is a curatorial initiative that seeks to respond to the COVID-19 pandemic in ‘real-time’ while considering what moments from this event will be significant for future Canadians. The initiative aims to decrease social isolation during the pandemic; document technological challenges as well as Canadian innovation and adaptations prompted by the pandemic; preserve and share the experiences of the public and museum community; and develop and experiment with new methods and methodologies of curation.

## Jennifer Fawcett

Jennifer Fawcett holds an MA in Sociology from the University College Cork in Ireland. She is currently a student in Arts Administration with a Public History Concentration at Bishop’s University in Sherbrooke, Quebec. In summer 2021, she worked on the Curating Under Quarantine COVID-19 Vaccine Rollout Oral History Project.



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# Context

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The first half of 2020 saw the Canadian federal and provincial governments marshalling resources to mitigate the spread of COVID-19 through procurement of Personal Protective Equipment (PPE), and the development of protocols such as mask wearing and hand sanitization. The second half of the year saw a new focus on the procurement of vaccines and preparation for their rollout. From the start, the focus of the Canadian government has been to provide every eligible Canadian, who wishes to be vaccinated, a free vaccination by the end of 2021. The scope of this challenge has been extraordinary, given Canada's lack of domestic vaccine manufacturing infrastructure, the vast size of the country, and the diverse communities and cultural groups of our population — who all have different needs. Practically speaking, the vaccines themselves have come with their own manufacturing, storage and transportation issues.

This environmental background report offers insight into the demands of this situation, highlighting the broad areas of responsibility at the federal, provincial, and territorial levels. Finally, there will be a short discussion on the need for accurate vaccine information campaigns in order to combat vaccine hesitancy within the population, and to dispel vaccine misinformation.

## Responsibilities of the Federal Government

The federal government's key responsibilities lie with the procurement of vaccines and vaccine equipment for administration and storage. It is also responsible for the regulation, approval, and monitoring of the vaccines available. A key task for the federal government was to coordinate the logistics of vaccine delivery to the provinces and territories. A COVID-19 Task Force was established in 2020, and the knowledge and expertise of the National Advisory Committee on Immunization (NACI), as well as the findings from Health Canada and the Public Health Agency of Canada, were included in federal decision making. The federal government also set up the National Operations Centre to facilitate the delivery of vaccines and vaccine equipment across Canada.<sup>1</sup>

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<sup>1</sup> Canada. Public Health Agency of Canada. *Canada's COVID-19 Immunization Plan: Saving Lives and Livelihoods*. December 8, 2020. <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/canadas-reponse/canadas-covid-19-immunization-plan.html>

## Procurement and Logistics

Public Services and Procurement Canada (PSPC) is responsible for the procurement of the vaccinations themselves, as well as all required vaccine-related equipment such as needles, syringes, swabs, and gauze. To this end, with the aid of the COVID-19 Vaccine Task Force, the search for suitable candidates for Canada's vaccine portfolio began in April 2020. Advance Purchase Agreements (APAs) were signed with Pfizer BioNTech and Moderna in August 2020, and the list was expanded over the next few months to include AstraZeneca, Johnson & Johnson, GlaxoSmithKline, Novavax, Sanofi, and Medicago. At the time of writing (May 21, 2021), vaccines from the first four companies have been approved by Health Canada, while the others are pending approval. The Moderna vaccine is largely produced in Cambridge, Massachusetts. Pfizer BioNTech is produced in Germany and Belgium. AstraZeneca is produced in Germany and Belgium, as well as in India at the Serum Institute. Finally, the Johnson & Johnson (Janssen) vaccine is generally manufactured at facilities in the United States. As mentioned previously, Canada does not currently have domestic manufacturing capabilities for COVID-19 vaccines, thus is reliant on the delivery quantities and schedules promised by each manufacturer. Negotiation and communication with the pharmaceutical companies therefore remains one of the highest priorities for PSPC, in order to maintain a steady flow of vaccines into Canada. Their other task was to ensure vaccine purchases for the next few years to come, resulting in the signing of agreements for 2022 and 2023, with options to purchase in 2024.<sup>2</sup>

After the initial APAs were signed, the PSPC tackled the next considerable obstacle: delivery and storage of vaccines. The first vaccine candidate, Pfizer BioNTech, required ultra-cold storage in the -70 C range. Its counterpart, the mRNA vaccine made by Moderna, did not require ultra-cold storage, but still required considerable refrigeration. In order to ensure safe delivery and storage of all vaccines across Canada, PSPC purchased 389 freezers at -80 C, 100 freezers at -20 C, 111 fridge/freezer combos at -20 C, and 100 refrigerators. They have also established contracts with 10 companies across Canada to provide dry ice on

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<sup>2</sup> Canada. Public Services and Procurement Canada. *Canada's vaccine agreements: A strategy to cover all bases*. March 16, 2021. <https://www.tpsgc-pwgsc.gc.ca/comm/aic-sct/ententes-agreements-strat-eng.html>

demand. A vital component of the logistics required to roll out the vaccines has been to set up and upgrade the current information technology system, for the monitoring of data such as vaccine uptake, adverse effects, and so forth. This system is described the national vaccine management IT platform (NVMIP), and the contract to provide it was awarded to Deloitte at a cost of \$16,138,945.90 CAD.<sup>3</sup> FedEx and Innomar Strategies are the main contracted delivery companies, although Pfizer vaccinations are delivered by UPS.<sup>4</sup> Establishing the Immunization National Operations Centre in December 2020 brought together a range of experts to deal with the coordination of distribution and supply across Canada. Operation VECTOR — the Canadian Armed Forces’ support to the federal, provincial, and territorial governments for the distribution of COVID-19 vaccines — has been essential to supporting this logistical effort.<sup>5</sup>

### **Regulation and Reporting**

Approval and regulation of the vaccines is necessary to ensure that Canadians have access to safe, effective vaccinations, information, and a process that allows adverse effects to be monitored. While the PSPC, with the aid of the COVID-19 Task Force, may present or even advance-purchase vaccines, they cannot be used until they meet the regulations of Health Canada and the Public Health Agency of Canada. These two bodies oversee all regulation and monitoring of the vaccines. This involves evaluating the trials published by the manufacturers and keeping up to date with changing information. They also inspect places of production and monitor ingredients to ensure quality control. This has recently been seen with the recent withholding of a delivery of 300,00 Johnson & Johnson vaccines that arrived in April 2021. Part of the vaccine was produced in the Emergent BioSolutions’ Baltimore facility, which was responsible for millions

of Johnson & Johnson doses being spoiled in March. Therefore, Health Canada will not release the doses until they are assured that quality standards have been met. As of May 16, 2021, Health Canada says it may be several weeks before their review is completed.<sup>6</sup> This will obviously delay some of the planned vaccinations. Monitoring of vaccines before and after use is constantly evolving, and it is the benchmark of the guarantees to Canadians that only safe vaccines will be used.

### **The Role of the National Advisory Committee on Immunization (NACI)**

The National Advisory Committee on Immunization (NACI) provides guidelines and recommendations for all immunizations approved by Health Canada. In the context of the COVID-19 vaccinations, this would include guidance on at-risk groups, the scheduling of immunizations as per age cohort, or synthesizing and updating information on adverse events. The function of the NACI can be seen at different points during the rollout, for example, in decisions regarding postponement of the second dose to allow more candidates to receive the first dose.<sup>7</sup> The NACI has also issued recommendations on age cutoffs for the AstraZeneca vaccine, based on an analysis of the costs and benefits of a vaccine for COVID versus the risk of development of rare blood clots related to Vaccine-Induced Immune Thrombotic Thrombocytopenia (VITT).<sup>8</sup> NACI continues to provide recommendations as the situation changes. In general, the provincial and territorial governments will use a combination of information from Health Canada, the Public Health Agency of Canada, and NACI to determine their particular vaccine rollouts. The decision-making process undertaken by each province and territory is detailed in the next section.

<sup>3</sup> Canada. Government of Canada. *Procuring Vaccines for COVID-19*. April 29, 2021. <https://www.canada.ca/en/public-services-procurement/services/procuring-vaccines-covid19.html>

<sup>4</sup> Canada. Public Services and Procurement Canada. *Government of Canada awards contract to distribute COVID-19 vaccine from coast to coast to coast*. December 7, 2020. <https://www.canada.ca/en/public-services-procurement/news/2020/12/government-of-canada-awards-contract-to-distribute-covid-19-vaccine-from-coast-to-coast-to-coast.html>

<sup>5</sup> Canada. National Defence. *Operation VECTOR*. May 17, 2021. <https://www.canada.ca/en/department-national-defence/services/operations/military-operations/current-operations/operation-vector.html>

<sup>6</sup> Rachel Aiello. “It Could Be Weeks before Health Canada Finalizes Review of J&J Doses: Dr. Sharma.” *Coronavirus*. CTV News, May 16, 2021. <https://www.ctvnews.ca/health/coronavirus/it-could-be-weeks-before-health-canada-finalizes-review-of-j-j-doses-dr-sharma-1.5428562>.

<sup>7</sup> Canada. National Advisory Committee on Immunization. *National Advisory Committee on Immunization (NACI): Summary of extended dose interval statement of April 7, 2021*. April 7, 2021. <https://www.canada.ca/en/public-health/services/immunization/national-advisory-committee-on-immunization-naci/covid-19-summary-extended-dose-interval.html>

<sup>8</sup> Canada. National Advisory Committee on Immunization. *Archived 8: NACI rapid response: Recommended use of AstraZeneca COVID-19 vaccine in younger adults*. March 29, 2021. <https://www.canada.ca/en/public-health/services/immunization/national-advisory-committee-on-immunization-naci/rapid-response-recommended-use-astrazeneca-covid-19-vaccine-younger-adults.html>



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## Provincial Response

Canada is a vast country, with oftentimes extreme differences in population make-up and needs. Throughout the pandemic, hotspot areas have borne the brunt of the virus, while other areas remain relatively untouched. Although the federal government had already committed to supporting the provinces in the logistical aspects of procurement, storage, transport, and delivery of vaccines, the latter part of 2020 was an opportunity for the provinces and territories to prepare the groundwork for their individual rollouts. This has been represented by a dual process. First, there was a requirement to evaluate the data available, along with the recommendations from the umbrella health agencies and advisory committees in Canada, to set goals and priorities. Obviously, at the beginning of the rollout, provinces and territories prioritized those who were either health vulnerable or exposure vulnerable, according to the current progression of the pandemic in their jurisdiction.<sup>9</sup> As the vaccines have made their way through these initial groups, provincial and territorial governments continue to rely on the recommendations of institutions such as NACI to hone their decision-making process. This is reflected in a general similarity of the vaccine phasing, according to age category in most provinces and territories. Some of the factors that are taken into consideration are risks in communities related to geography, population density, impact of low socio-economic class, and the experience of racialized communities. Equally, each province and territory must determine the vaccination protocol and priority for those with pre-existing health conditions, those living in care homes, or those who must carry out essential work to maintain the functioning of society. Another important responsibility of the provincial and territorial governments is to monitor any adverse events and issues with vaccine uptake.

Secondly, the actual groundwork of preparing vaccine clinics and training healthcare professionals to administer the vaccine is one of the primary responsibilities of the provincial and territorial governments.<sup>10</sup> This work also

embodies a wide-scale effort to plan booking systems, to ensure simplicity and accessibility while eliminating barriers to vaccination uptake. At a municipal level, it was determined that vaccination sites had to be in pharmacies, work sites, and community hubs that can welcome large numbers with safe distancing. The goal of providing a vaccination to every Canadian who wants one by the end of 2021 returns the focus of this broad initiative to the actual experience of the individual. How will the average person book an appointment? How far will they have to travel? What can they expect at the vaccination centre? Who do they turn to if they have fears or concerns? For this vaccination effort to be successful, each province and territory must understand their citizens' needs and make the process transparent and accessible. The following section summarizes some key features of the rollout in the provinces and territories. To facilitate comparison, provinces with similar situations have been placed together. These groupings are: provinces with high COVID-19 rates, the Prairies, the "Atlantic bubble," and the Territories.

### **Provinces with High COVID-19 Rates**

#### **Quebec**

The Institut National de Santé Publique du Québec (INSPQ) provided guidance for the delivery of vaccines to priority groups, according to availability of supply and arrival in the province. The criteria were based on four criteria: age-associated risk of infection, complication, and death, the existence of underlying health conditions, living situations that put people at risk of experiencing an outbreak, and finally, a job or profession that would lead to increased risk of exposure. Using this categorization, the provincial population was ranked in 11 groups of descending priority. Group 1 comprised elders in residential and long-term care centres. This was a departure from the plan of many other provinces, who diverted the first vaccines to intensive care units and other hospital settings. This was a direct result of the dire consequences that were seen in Quebec's long-term elder care facilities throughout 2020. Group 2 included workers in health care and social services. Group 3 included seniors with partial or full loss of autonomy living in private residences for seniors. Group 4 targeted remote and isolated communities, particularly considering Indigenous populations at high risk. Group 5 comprised individuals aged 80 and over, Group 6 aged 70 to 79, and Group 7, 60 to 69 years of age. Group 8 includes adults under the age of 60 with underlying health conditions that put them at risk of complications from COVID-19. Group 9 is for essential workers who are in

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<sup>9</sup> Canada. Government of Canada. *Vaccines for COVID-19: How to get vaccinated or register*. May 17, 2021. <https://www.canada.ca/en/public-health/services/diseases/coronavirus-disease-covid-19/vaccines/how-vaccinated.html>

<sup>10</sup> Canada. Public Health Agency of Canada. *Canada's COVID-19 Immunization Plan: Saving Lives and Livelihoods*. December 8, 2020. <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/canadas-reponse/canadas-covid-19-immunization-plan.html>

contact with high-transmission environments. Groups 10 and 11 are characterized as the general population, adults and children respectively. As of May 14, 2021, all adults over 18 are eligible for vaccination.<sup>11</sup> Quebec has utilized large companies to help with mass vaccination, both through hosting vaccine clinics for their employees, and by furnishing human resources and material needs. It is notable that Quebec was the first province to deviate quite significantly from the NACI recommendations, and even at times from the vaccine manufacturer's directions. The first instance was on December 18, 2020, when the INSPQ recommended delaying the second dose of vaccine and giving as many people as possible a first dose. This controversial decision was later adopted by many other provinces. Another example was the decision to recommend the AstraZeneca vaccine to those over 65, in the absence of a large amount of data in the clinical trial regarding the efficacy and safety in this age group. On review of the data coming from the United Kingdom, the INSPQ decided to go ahead, and the NACI followed their lead and reversed its decision on AstraZeneca on March 16, 2021.<sup>12</sup> Currently, AstraZeneca first doses have been paused in Quebec. Vaccination of youth aged 12 to 15 will begin on May 25, 2021.

## Alberta

Alberta began its early phase vaccinations in December 2020, targeting healthcare workers in intensive care units, respiratory therapists, and those working in senior congregate care facilities. This phase mostly focused on areas with high rates of COVID-19, namely Edmonton and Calgary. Phase 1 in January 2021 saw the eligibility criteria expand to all seniors 75+ regardless of where they lived, a broadened group of healthcare workers (for example, paramedics) and First Nations, Inuit, and Métis persons born in 1956 or earlier (turning 65+) living in a First Nations community or Métis Settlement. Starting March 15, 2021, Phase 2A saw the age criteria drop by five years. Starting March 30, 2021, Phase 2B reflected another five-year age drop and the inclusion of all Albertans born after 2009 with eligible high-risk underlying conditions, such as cancer, chronic heart or lung disease, diabetes, and so on. Pregnant women were also included in this grouping.

Phase 2C started April 12, 2021, and covered a broader range of healthcare workers such as doctors and dentists, teachers and daycare workers, and inmates and staff of correctional facilities. It is interesting to note that workers at meat-packing plants fall into this group, as abattoirs and meat-packing facilities have been the source of several large outbreaks in Alberta. Other essential workers like firefighters and border patrol officers were included, and a recognition was also made for informal family caregivers. Phase 2D started April 30, 2021 and included Albertans over 50, and First Nations, Indigenous, and Métis people over 30. Phase 2 also included an AstraZeneca availability for those over 40, or over 30 in the hard-hit Bow Valley and the Regional Municipality of Wood Buffalo, starting on April 6, 2021. It is important to note that Alberta was one of the first provinces to lower the eligibility to 40 for AstraZeneca, and was the first province to run out of supply of this vaccine. Alberta reached its Phase 3 goal — for the general public to become eligible for vaccination — on May 6, 2021. It was the first province to authorize the Pfizer vaccine for those as young as 12, starting May 10, 2021. In general, Alberta offers vaccinations through participating pharmacies, Alberta Health Services clinics, or on-site vaccination clinics<sup>13</sup> in some cases, such as meat-packing plants or senior facilities.

## Ontario

Ontario created a three-phase plan for vaccine rollout.<sup>14</sup> Phase 1 ran from December 2020 to March 2021, and targeted those at the highest risk. Phase 2 ran from April to June 2021, and was characterized by “mass deliveries of vaccines” aimed at vaccinating around 9 million people. Phase 3, from July to September 2021, is described as a “steady state” where the remainder of the unvaccinated population can receive one. As in many other provinces, Ontario delayed second doses for 16 weeks, to allow as many Ontarians as possible to receive a first dose.<sup>15</sup> Equally, there is now a halt to giving AstraZeneca as a first dose. Ontario is the only province to cite a higher risk of vaccine-induced immune thrombotic thrombocytopenia (VITT) and emergence of several cases as the rationale for this pause, as most other provinces calling a halt

<sup>11</sup> Canada. Quebec. Institut National de Santé Publique du Québec. *Avis préliminaire sur les groupes prioritaires pour la vaccination contre la COVID-19 au Québec*. April 7, 2021. <https://www.inspq.qc.ca/publications/3085-groupes-prioritaires-vaccination-covid>

<sup>12</sup> Les Perreux. “Vivre Ensemble: Behind Quebec's COVID-19 Vaccine Plan.” March 22, 2021. <https://www.theglobeandmail.com/canada/article-vivre-ensemble-behind-Quebecs-COVID-19-vaccine-plan/>.

<sup>13</sup> Canada. Alberta. *COVID-19 Vaccine Program*. May 17, 2021. <https://www.alberta.ca/covid19-vaccine.aspx>

<sup>14</sup> Canada. Ontario. *Ontario's COVID-19 Vaccination Plan*. May 13, 2021. <https://covid-19.ontario.ca/ontarios-COVID-19-vaccination-plan>

<sup>15</sup> Canada. Ontario. *COVID-19 Vaccine Availability and Rollout*. January 6, 2021. [https://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/docs/vaccine/COVID-19\\_vaccine\\_availability\\_rollout.pdf](https://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/docs/vaccine/COVID-19_vaccine_availability_rollout.pdf)

have cited lack of supply.<sup>16</sup> As many regions of Ontario are experiencing a brutal third wave of infections, the vaccine plan was adapted in late April/early May 2021 to target high-transmission neighbourhoods by sending them at first 25 per cent, and then 50 per cent of vaccines. Residents could search their postal code to see if they were living in a designated “hotspot” neighbourhood. The province plans to return to the normal schedule in the last two weeks of May 2021. This deviation from the original plan demonstrates the needs for constant re-evaluation of a quickly evolving situation.<sup>17</sup>

### **British Columbia**

British Columbia’s immunization phases are also based on age but are classified under four groups, relative to health vulnerability. These groups are divided into Phase 1 and Phase 2 for High-Risk Population, and Phase 3 and Phase 4 for General Population. Phase 1 lasted from December 2020 to February 2021 and largely focused on seniors in long-term care facilities, or assisted living, as well as the staff of these institutions. Also included here were frontline healthcare workers, such as those working in intensive care units supporting COVID-19 patients. Finally, those living in remote and isolated Indigenous communities were also eligible to be vaccinated in Phase 1. Phase 2 lasted from March to April 2021, and saw public health vaccination clinics for all other seniors born in 1941 or earlier, or First Nations, Indigenous, and Métis people born in 1956 or earlier, who had not been vaccinated in Phase 1. Priority groups in this phase also included other medical practitioners, other vulnerable populations in congregate work/living situations, and staff in community home support and nursing services. Phase 3, from April to May 2021, functioned to cover those aged 79 to 60 (or 64 to 18 for First Nations, Indigenous, and Métis peoples) in decreasing five-year age increments. At this time, those who were on the clinically extremely vulnerable list also received invitation letters for vaccination. Finally, Phase 4 began in May and is expected to last until June 2021. This phase covers the general population aged 59 to 18 (in order of oldest to youngest), again eligible for vaccination in decreasing five-

year increments. Currently, pregnant people over 16 can get vaccinated. British Columbia is also prioritizing high-transmission neighbourhoods, so people living in certain postcodes may get their vaccination slightly earlier. There is also some deviation from the overarching provincial plan for some small and/or remote communities, which is described as a community-specific approach. Second doses are currently scheduled after a 16-week delay.<sup>18</sup>

### **The Prairies**

#### **Manitoba**

Manitoba’s vaccine rollout appears more strongly focused on delivery modes than age-related eligibility. As of May 11, 2021, those aged 18 and over are already eligible for vaccination, which is quite early compared with other provinces. Manitoba deployed six modes of vaccine delivery: the pilot site, Supersites, Focused Immunization Teams (FITs), pop-up or mobile sites, First Nations sites, and finally, distributed delivery. All of these models were developed to be scalable, so that as deliveries of vaccine from the federal government increased, the capacity to vaccinate more individuals would easily increase as well. The focus has been on innovative and flexible ways to reach as many people as possible. The pilot site was located at Rady Faculty of Health Sciences at the University of Manitoba; this allowed the first doses to be administered and for experience to be gained by those responsible for overseeing vaccination efforts and managing vaccines. The supersites are in larger urban areas, with the goal of vaccinating many individuals as efficiently as possible. The FITs travel to locations such as long-term care facilities and congregate living situations. Pop-up sites are mini clinics that can operate out of specific neighbourhoods or community centres where needed. First Nations clinics were developed in partnership with the First Nations communities, to ensure culturally safe experiences for these vulnerable communities and to remove as many barriers to immunization as possible. For example, First Nations clinics are often located in Friendship centres or Aboriginal health centres, and may provide access to childcare, offer the presence of a supportive Elder, or accommodate smudging or other cultural expressions.

<sup>16</sup> Muriel Draaisma. “Ontario Will No Longer Give AstraZeneca COVID-19 Vaccine as 1st Dose Due to Blood Clot Risk.” *CBC News*, May 11, 2021. <https://www.cbc.ca/news/canada/toronto/ontario-update-astrazeneca-vaccine-1.6022545>.

<sup>17</sup> Samantha Beattie. “Ontario Stops Increased Vaccine Supply to Toronto Hot Spots as City Officials Urge Province to Reconsider.” *CBC News*, May 12, 2021. <https://www.cbc.ca/news/canada/toronto/toronto-covid-update-may-12-1.6023534>.

<sup>18</sup> Canada. British Columbia. *COVID-19 Immunization Plan*. May 17, 2021. <https://www2.gov.bc.ca/gov/content/covid-19/vaccine/plan>

Finally, distributed delivery is characterized by deploying vaccines to medical offices and pharmacies, once the supply of vaccines was high enough and remained stable. Currently, eligibility at supersites is 18+, using the mRNA vaccines.<sup>19</sup> As the supply is mostly Pfizer, children aged 12 and up will be able to be vaccinated as of May 21, 2021. Medical offices or pharmacies using the AstraZeneca vaccine require eligibility at age 40+, or 30+ with eligible health conditions. However, the use of AstraZeneca has been paused for first doses except in the case of those who cannot receive another vaccination, as the province cites the remainder of the supply will be prioritized for second doses. Finally, bookings for second doses will be available starting May 22, 2021, with priority for those with eligible high-risk underlying health conditions.<sup>20</sup>

### Saskatchewan

In the Saskatchewan COVID-19 Immunization Plan published on February 9, 2021, the rollout was characterized by a slightly different approach. The rollout began with a pilot project in Regina in December 2020, when 1,950 healthcare workers received the Pfizer vaccination. The aim of this was to test procedures and gain experience in the handling and storage of this particular vaccination. Phase 1 followed in late December 2020, targeting high-risk populations as seen before (elderly in long-term care facilities, individuals aged 50 or more in remote northern communities, and healthcare workers). Another difference in Saskatchewan, compared with many of the other provinces, is that all seniors over 70 were considered high risk and were prioritized for first vaccinations. Phase 2 began in March 2021 and includes the rest of the population, in decreasing 10-year increments. However, those considered clinically extremely vulnerable will also be prioritized in Phase 2, and will receive letters that allow them to book appointments regardless of age. While Saskatchewan began their pilot project by respecting the 21-day delay between first and second doses, by March 2021 they too followed the recommendations from NACI to increase the delay in order to vaccinate more people with first doses more quickly. However, as of May 17, 2021, second doses will be offered to the first wave of recipients, and the province hopes to have everyone fully vaccinated by July 2021.<sup>21</sup>

<sup>19</sup> Canada. Manitoba. *Immunization Clinics*. May 14, 2021. <https://www.gov.mb.ca/covid19/vaccine/clinics.html>

<sup>20</sup> Canada. Manitoba. *COVID-19 Vaccine Bulletin #79*. May 17, 2021. <https://news.gov.mb.ca/news/index.html?item=51297&posted=2021-05-17>

<sup>21</sup> Canada. Saskatchewan. *Vaccine Delivery Phases*. February 9, 2021. <https://www.saskatchewan.ca/government/health-care-administration-and-provider-resources/treatment-procedures-and-guidelines/emerging-public-health-issues/2019-novel-coronavirus/COVID-19-vaccine/vaccine-delivery-phases#phases>

### The “Atlantic Bubble”

The Maritime provinces have been following a three-phase rollout. The phasing of this rollout is similar to NACI recommendations, whereby those most at risk of serious illness or death, often living in congregate situations, were prioritized for first vaccinations. The second phase covers first responders, a broader range of healthcare workers, and those who are extremely clinically vulnerable. Phase 3 represents widening access to the general population. Of note in these provinces is an addition to Phase 2: those who may have to travel out of the province, such as long-distance truckers, rotational workers, or flight crews. As of May 17, 2021, New Brunswickers over the age of 30 are eligible for the vaccine. Groups targeted for June 2021 include adults between 18 and 29, as well as youth between 12 and 15, with the Pfizer vaccine only. The province aims to vaccinate all those who wish to be vaccinated with a first dose by July 2021.<sup>22</sup>

According to Newfoundland and Labrador’s COVID-19 Immunization Plan, the timing of the rollout was timed as follows: Phase 1 was timed from December 2020 to March 2021, Phase 2 from April to June 2021, and Phase 3 from July to September 2021. Currently, Newfoundland and Labrador is ahead of schedule as they are currently vaccinating those who fall into Phase 3. In Phase 2, the province also included a similar list of extremely clinically vulnerable people as seen earlier. They also focused on first responders, health care workers, and other essential workers before moving down the age groups of the general population in five-year intervals. As seen before, First Nations, Indigenous, and Métis peoples were also prioritized. Newfoundland and Labrador has four regional health authorities: Eastern Health, Western Health, Central Health, and Labrador-Grenfell. This allows the provincial government to adjust as necessary, depending on each region’s needs. A notable inclusion to the list of priorities for this province are workers who travel between provinces, such as rotational workers, truck drivers, and flight crew. This is a good example of an alteration of the general schedule based on the realities of the needs of the province.<sup>23</sup>

<sup>22</sup> Canada. New Brunswick. *COVID-19 Vaccines*. May 17, 2021. <https://www2.gnb.ca/content/gnb/en/corporate/promo/covid-19/nb-vaccine.html.html>

<sup>23</sup> Canada. Newfoundland and Labrador. *COVID-19 Vaccine*. May 17, 2021. Canada. New Brunswick. *COVID-19 Vaccines*. May 17<sup>th</sup>, 2021. <https://www2.gnb.ca/content/gnb/en/corporate/promo/covid-19/nb-vaccine.html>

Nova Scotia has designated their phases as Phase 1: initial doses and planning, Phase 2: expanding access, and Phase 3: All Nova Scotians. In general, vaccine eligibility is determined according to age group, with 80 year olds eligible in March 2021, and 20 year olds eligible in June 2021. First Nations will run their own clinics in 13 Mi'kmaw community centres, while the province facilitates supply of vaccines and vaccine equipment to the centres. Nova Scotia reached the eligible group of 30 year olds in the second week of May, similar to New Brunswick.<sup>24</sup> Following a similar schedule, Prince Edward Island had vaccinated just over 60 per cent of its residents with a first dose by May 12, 2021. Eighteen year olds are already eligible, and the plan is for second doses to be administered over the summer, to be completed by September 2021.<sup>25</sup>

### **The Territories**

In general, Yukon, Nunavut, and the Northwest Territories (NWT) have seen a simplified and accelerated rollout. Due to the complications of storing and transporting the Pfizer vaccine, the Moderna vaccine was preferred for the territories. In Yukon, a large vaccination centre was established in Whitehorse to accommodate those in the city and neighbouring rural communities. Mobile units travelled to more remote communities, to elder care facilities, and other institutions where residents could not easily travel. While the rollout was still phased to prioritize vulnerable groups and healthcare workers, the objective was to offer all Yukoners over 18, who wished to be vaccinated, a first dose by March 2021. Currently, 74 per cent of eligible Yukoners have received their first dose, and in fact 66 per cent have received their second. Unlike most provinces in Canada, the second dose is being given as per the manufacturer's schedule, between 28 and 35 days after the first.<sup>26</sup> In Nunavut, as of May 10, 2021, 66 per cent of those eligible have their first dose, and 52 per cent have already had their second dose. This region is also offering Moderna and sticking to the manufacturer's schedule. Deployment in Nunavut is often through community centres or schools, with many offering walk-

in clinics.<sup>27</sup> The NWT faced similar logistical challenges; the first vaccines distributed to the NWT were Moderna, given the cold-chain requirements of the Pfizer vaccine. A strong reliance was placed on community resources and knowledge to ensure that the planning of mobile clinics and vaccination centres took into consideration the factors that may influence vaccine hesitancy in this region. Historical trauma and fears about communicable disease in the First Nations and Indigenous communities were taken into consideration, with efforts made to build trust and provide transparency to community members. Currently, the Pfizer vaccine is available in Yellowknife as adaptations were made to the cold-chain requirements, as mentioned previously. While priority groups received first doses in January and February 2021, as of March 2021 all adults over 18 were deemed eligible.<sup>28</sup> As of May 8, 2021, 58 per cent of people living in the NWT have received two doses of vaccine, and 66 per cent have received one.<sup>29</sup>

### **The Vaccine Rollout as an Iterative Process**

In some respects, the vaccination campaign is complicated by many moving parts. When plans were laid in December 2020, there was little discussion of the impact of the variants emerging from the United Kingdom, South Africa, Brazil, and now India. The efficacy of all approved vaccines against these variants is still being studied. At the same time as the vaccine rollout began in earnest, the variants took swift hold in Canada in the spring of 2021. Most worrying are the increasing numbers of younger people contracting COVID-19, which seems to have outpaced the vaccination campaign for their age group in certain areas. Dealing with a third wave of infections, at the very same moment as the vaccination rollout, creates many situations where the federal, provincial, and territorial governments need to rapidly re-evaluate previous guidance. A good case study to illustrate this process is the implementation of the AstraZeneca vaccine over the first few months of 2021.

<sup>24</sup> Canada. Nova Scotia. *Coronavirus (COVID-19): Vaccine*. May 17, 2021. <https://novascotia.ca/coronavirus/vaccine/>

<sup>25</sup> Canada. Prince Edward Island. *COVID-19 Vaccination Data*. May 17, 2021. <https://www.princeedwardisland.ca/en/information/health-and-wellness/covid-19-vaccination-data>

<sup>26</sup> Canada. Yukon. *Sleeves up, Yukon. The future is looking bright*. May 17, 2021. <https://yukon.ca/en/this-is-our-shot>

<sup>27</sup> Canada. Nunavut. *COVID-19 Vaccination*. May 17, 2021. <https://www.gov.nu.ca/health/information/COVID-19-vaccination>

<sup>28</sup> Canada. The Northwest Territories. Northwest Territories Health and Social Services Authority. *COVID-19 Vaccine*. May 17, 2021. Canada. Nunavut. *COVID-19 Vaccination*. May 17, 2021. <https://www.gov.nu.ca/health/information/COVID-19-vaccination>

<sup>29</sup> Canada. Northwest Territories. *GNWT's Response to Covid-19: Latest update*. May 14, 2021. <https://www.gov.nt.ca/covid-19/en/services/latest-updates>

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Although Health Canada authorized the use of AstraZeneca in February 2021 for adults aged over 18, the vaccination has been the subject of several pauses and re-evaluations, both globally and in Canada. As the data has evolved, the risk of a vaccine-induced immune thrombotic thrombocytopenia (VITT) event has, in some cases, been deemed greater than the risks presented to certain populations by COVID-19. To this end, the vaccine was only offered to those over the age of 30 as advised by Health Canada. In some provinces such as Ontario, Alberta, and Québec, the age limit was set at 40 or 45 for the latter. The supply of this vaccine came at a unique moment when other vaccinations were in limited quantities, and many people availed of the AstraZeneca vaccine the moment they were able to. However, as of May 11, 2021, Alberta, Ontario, and Saskatchewan have made the decision to halt giving AstraZeneca as first doses. Quebec is still offering what remains of their AstraZeneca supply to eligible candidates but will probably reserve much of what is left for second doses. Manitoba will only give AstraZeneca for second doses. Currently, there have been 12 confirmed cases of VITT in Canada, with one death reported in each of Alberta, Quebec, and Ontario.<sup>30</sup> It is interesting to note that this type of risk assessment is not necessarily reflected globally, as different countries are taking different approaches to the use of this vaccination. Further to the idea of the vaccine rollout as an ever-evolving process, the next few months will see discussion and deliberation on the possibilities of combining an AstraZeneca first dose with a second dose of one of the mRNA vaccines. This is one possibility that may be authorized by Health Canada, in order to deal with any shortfall of people who have been originally vaccinated with AstraZeneca before the guidelines began to change.

## Educative/Socio-psychological Factors

A central idea at every governmental level — federal, provincial, territorial, or municipal — has been the notion that people need support in asking questions, finding information, and making sense of what they see and hear about the vaccines. Just as part of the strategy to make vaccines accessible has been focused on planning physical locations, deploying human resources and technology

and coordinating appointment scheduling, the socio-psychological elements behind vaccine uptake have not been neglected. Common notions have been seen in many provinces and territories, such as making culturally safe vaccination sites, sending mobile clinics to remote or isolated communities, or providing information to a variety of linguistic groups. The federal government has also provided many digital resources that can be used on social media platforms or in other situations where a “one-pager” might be necessary to provide simple, clear information.<sup>31</sup> Very often, these resources take a strong visual approach, with minimal text; this ensures that it is accessible to a wide range of viewers. While the provinces and territories may each have provided their own campaigns (such as “Sleeves up, Yukon!”), all those living in Canada are encouraged to seek updated information from federal resources, such as on the Health Canada website. Public relations efforts, such as photographs or media stories about governmental officials including Prime Minister Justin Trudeau and Premier François Legault receiving their first dose of the vaccine, have been prominent.

An excellent case study for the role of social media in combating vaccine hesitancy has been the *This is Our Shot* campaign, launched April 28, 2021.<sup>32</sup> This grassroots movement aims to “replace vaccine hesitancy with vaccine confidence,” and especially targets racialized communities. These communities both have higher risks of negative outcomes from COVID-19 outbreaks, and live with many socio-economic factors that cause them to be vulnerable. There are equally high levels of vaccine hesitancy and lack of trust in the medical establishment in these communities, often as a result of systemic racism. The campaign aims to provide information in many languages, using different cultural approaches as necessary, and to inspire confidence in those questioning their choice to get the vaccine. The campaign already boasts many social influencers, and all proceeds from the sale of *This is Our Shot* t-shirts goes to Kids Help Phone. The campaign’s virtual town halls provide a forum for Canadians to pose questions to a wide range of medical professionals. As this short discussion shows, logistical and physical elements of the vaccine rollout have to be complemented by strong public health messaging and inclusivity, to ensure the greatest uptake of vaccines possible.

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<sup>30</sup> Adam Miller. “Future of AstraZeneca COVID-19 Vaccine in Question in Canada over Blood Clots, Supply Issues.” CBC News, May 12, 2021. <https://www.cbc.ca/news/health/astrazeneca-vaccine-paused-canada-blood-clot-vitt-1.6022821>.

<sup>31</sup> Canada, Public Health Agency of. “COVID-19: Social media and promotional resources for Health Canada and Public Health Agency of Canada.” Canada.ca./Gouvernement du Canada, May 13, 2021. <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/digital-resources.html>.

<sup>32</sup> “This Is Our Shot.” May 19, 2021. <https://thisourshot.ca/>.

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# Conclusion

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After a slow start plagued with delivery delays, Canada has seen a great increase in the amount of vaccines arriving per week since mid-May 2021. In many provinces and territories, the vaccine rollout has accelerated significantly, and targets are being met or even exceeded. Most encouraging is the noted fall in the percentage of vaccine hesitancy in provinces such as Alberta, where it was nearly 45 per cent in January 2021. Currently it stands at about 17 per cent, with most provinces averaging 10 to 12 per cent hesitancy. Saskatchewan is now the highest, at 24 per cent.<sup>33</sup> While every effort has been made to record information in this report as correct as of May 21, 2021, the reality of the situation means that changes occur on a daily basis. The summer will also see a range of updates,

such as the widespread vaccination of the 12 to 15-year-old age group, or the implementation of new guidelines for vaccine storage and administration. There will also be updates regarding the AstraZeneca second doses, or the practice of mixing vaccines. The steady progression towards herd immunity will have to take into consideration a variety of contingencies, yet the optimistic view of most provinces and territories is a return to as normal of a situation as possible by the autumn. The vaccines have allowed Canada's provinces and territories to create a roadmap towards an economic and social reopening that was hoped for and imagined, but certainly not guaranteed, just one short year ago.

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<sup>33</sup> Bill McFarlane. "Vaccine Hesitancy in Alberta Falls to 17 per Cent, Less than Half of January Peak: Angus Reid Poll," May 17, 2021. <https://calgary.ctvnews.ca/vaccine-hesitancy-in-alberta-falls-to-17-per-cent-less-than-half-of-january-peak-angus-reid-poll-1.5432033>.

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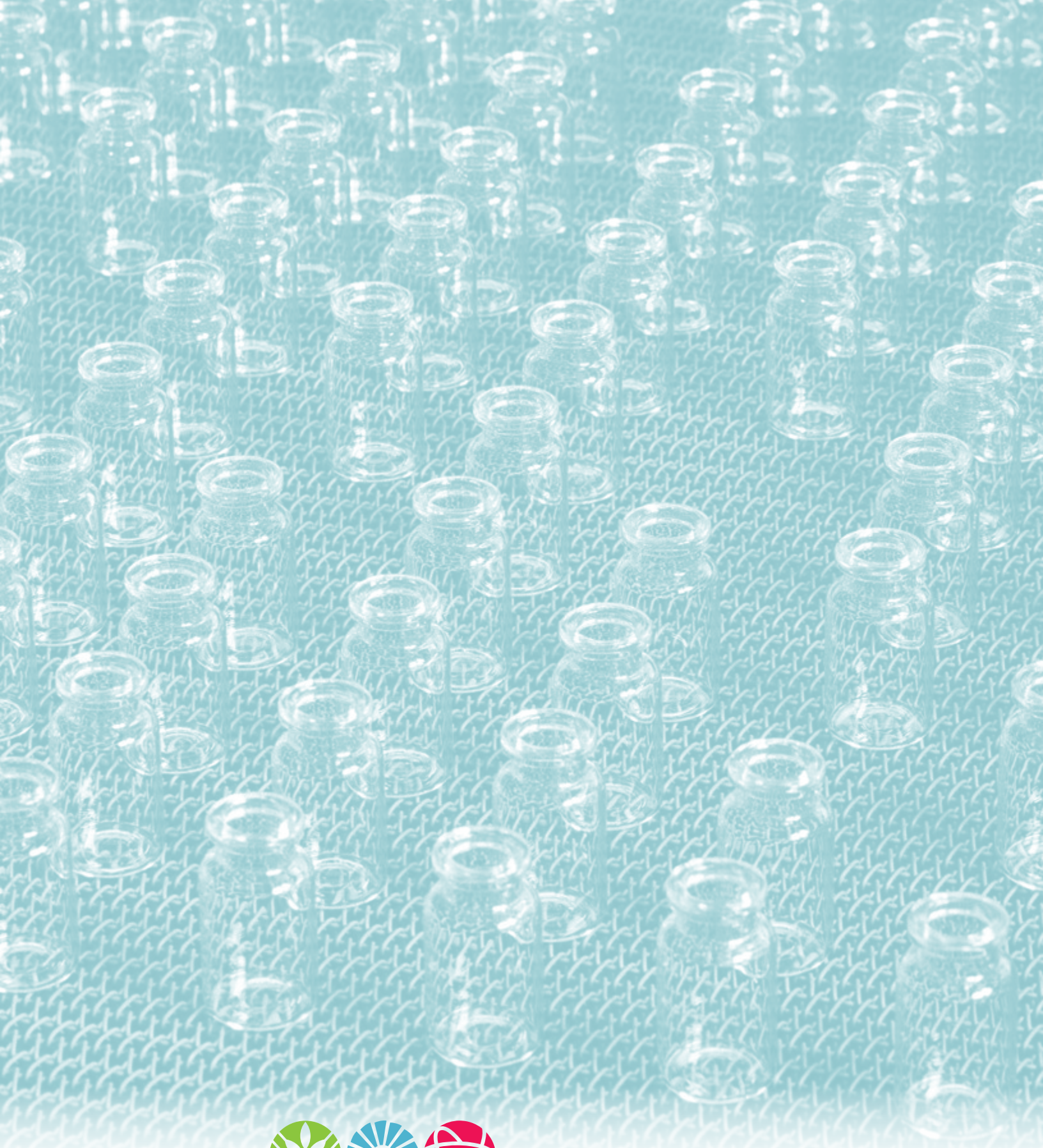
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