Canada's Foreign Covid Vaccine Donations

Final Draft

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History

With the emergence of Covid-19 came new scientific questions about the origins of virus and vaccine technology. Indeed, Coronaviruses have a special attribute that makes the common technology of "flu shots" not effective against it (Rodriguez et al., 2021, p. 2). There had been 6 coronaviruses discovered before the latest pandemic since 2002, which had already kickstarted the work for a functioning remedy. Therefore, the Covid-19 pandemic accelerated this race for the development of a successful vaccine, as "similarities with other coronaviruses [mean that] existing technologies can be deployed to speed the development of new vaccines and treatments" (Chaplin, 2020, p.5).

While the WHO has led experimental clinical trials since December of 2019 (when the virus was first clinically noticed), Western private pharmaceutical companies and Non-Western governments (notably, Russia and China) are the ones to have found the most widely known vaccines used in combating the pandemic today. Researchers around the globe are also currently testing over 115 different vaccines, mostly in small clinical trials, with only 11 vaccines now abandoned (Zimmer et al., 2022, table 1). In Canada, only 6 of these vaccines are approved (listed by vaccine and manufacturer) (*Approved COVID-19 Vaccines*, 2022) :

- Moderna Spikevax (ModernaTX, Inc.)
- Pfizer-BioNTech Comirnaty (BioNTech Manufacturing GmbH)
- AstraZeneca Vaxzevria (AstraZeneca Inc.)
- Johnson & Johnson (Janssen Inc.)
- Novavax Nuvaxovid (Novavax Inc.)
- Medicago Covifenz (Medicago Inc.)

An important aspect to notice in this list is that all of the manufacturers of these vaccines are private Western corporations, and most of them are not Canadian (except Medicago Inc., which will be touched upon further later). This then begs the question : How

does Canada donate Covid-19 vaccines, and are private corporations the right solution to such a widespread virus?

As it turns out, the most recent map representing the percentage of each country's vaccinated population (see Appendix I) resembles the one for the GDP per capita in 2020 (see Appendix II). Indeed, many of the most notable vaccines named earlier became a political tool at the beginning of their rollout. While trials for such vaccines were being done in Lower Income Countries (LICs), they were then being sold to the highest bidder. These bidders were even, in most cases, over-purchasing doses, effectively hogging these necessary resources. At the beginning of 2021, for example, Canada had "premarket commitments covering more than nine doses per person" (Roope et al., 2021, p. 2). What happened was a global vaccine inequity, with about 85% of Canadians having had at least one dose, while only 10% of Africans can say the same (Boyd, 2022, par. 11). Therefore, Higher Income Countries (HICs) have been pushed to donate vaccines, in order to contribute to Worldwide efforts in stopping the pandemic, and Canada is not excluded from such efforts.

Main Geopolitical Agents

The Canadian Government : Doubtable Promises

As mentioned above, the Canadian Government has, along with many other global leaders, "pledged to deliver 50 million [doses] directly along with enough cash for 150 million more by the end of [2022]" (Rabson, 2022, par. 2). Yet, in Canada's case, this information means that they are not able to donate tangible vaccines to other countries, but rather need to buy it from a third party before conducting these donations. The first domestic COVID-19 vaccine doses given to Canadians were administered on December 14th, 2020. Since then, over 32 million people have received at least one dose, representing 88.8% of Canadians over the age of 5 (*COVID-19 vaccination coverage in Canada*, 2022, table 1). Yet, the biggest threat Canadians could face regarding COVID-19 at this moment would be the

development of variants outside the country. Indeed, “it is necessary to achieve herd immunity through vaccination globally in order to prevent [COVID-19] from continuing to mutate, becoming more resistant to current vaccines and causing more periods of mass fatality” (Moore, 2021, par. 11).

However, Canada still has a long way to go before arriving at the goal of over 200 million donated doses in 2022. As of today, 22.4% of the year has already gone by, and yet less than 4.6% of the promised donations have been fulfilled by Trudeau’s administration.

Similarly, in February of 2021, when Canada found itself in the midst of yet another wave of Covid-19, it imported vaccines offered by the COVAX initiative, despite independently growing their vaccine reserves (BBC News, 2021, par. 1 to 5). Presently, Canada is the only G7 country to have done so. In addition to the fact that they themselves are a COVAX doner and that more than 10% of its population was already vaccinated at that time, which was more than most countries, this action was seen as highly selfish and, in the end, useless, as most canadians refused to get the Astrazeneca vaccine after May of 2021 (Rabson, 2021, par. 5). With the arrival of the Omicron variant in late-fall of 2021, vaccines were, once more, re-concentrated towards Canada’s own populations, insisting on the importance of Third doses. Many LIC leaders criticised this decision as well, as :

1. The Omicron variant itself is said to have been caused by a lack of proper vaccination in Nigeria or South Africa, both having less than 30% of their total population fully vaccinated, for the same causes mentioned above (Asadu, 2021, par 3).
2. In only 3 months of distributing them, Canada had reached more than 17 million third doses, yet had only sent 12.7 million doses overseas in total in 2021, most of them being leftover AstraZeneca that HICs saw as less valuable (Boyd, 2022, table 2).

When it comes to domestic vaccine development, the Federal government had initially been very active in donations to such developments, investing 1.3 billion dollars in 2021 in 29 different vaccine development facilities (Tsekouras, 2022, par. 12). Yet, Canada

had yet to approve such vaccines within its own borders, let alone to try to get them approved world-wide. Nonetheless, on March 3rd, 2022, Health Canada finally approved its first domestic vaccine : Medicago Covifenz, a plant-based vaccine established in Quebec City (Nelson, 2022, par. 2). Its innovative technology could mean more effective and easily-produced vaccines, as it would mostly use greenhouses and fields rather than the usual "specialized cell culture growth media and actual bioreactors" (English, 2022, par. 8). Despite this win, Canada is still discussing the issue of international approbation with the WHO, the main issue being Medicago Inc's ties to Philip Morris, a tobacco company, as the WHO has "very strict policies on partnering with tobacco and arms companies" (Snowdon Smith, 2022, par. 2). Therefore, mass international distribution of Medicago's Covifenz seems very unlikely, even more so as a donation through COVAX, which is partly administered by the WHO.

Therefore, Canada's role in vaccine distribution focuses on its riches as a G7 country, yet is faced with the reality of not truly being able to donate first-handedly, the impacts of which the Federal Government needs to balance between domestic and foreign vaccination. Another alternative to Covid donations could be an independent distribution of Medicago's Covifenz donations, but this would also take a lot of investment, work and time. It all boils down to how determined Canada is to help the world fight Covid-19.

The WHO : A Global Adviser?

First and foremost, the World Health Organisation (WHO) has had a massive and critical role throughout this latest pandemic, notably as an adviser for restrictions and a vaccine evaluator. With the rise of Xenophobia and Asian hate crimes due to the pandemic, they also pushed against misinformation and "linking communicable diseases to specific geographic regions" (American Psychological Association, 2020, par. 3).

Yet, their biggest role in the pandemic up to date has been global vaccine distribution. Accordingly, Canada is not the only one to blame in its underwhelming global vaccine distribution. As many of the country's donations are done through the COVAX initiative, the WHO also has a hand in its issues, as its co-leader. At the beginning of this initiative in 2020, many HICs started donating vaccines through pre-orders. Yet, the WHO and COVAX quickly started meeting problems, notably in delays, miscommunications and more errors due to faulty administration (Guarascio & Rigby, 2022, par. 23). In addition, donors themselves could benefit from the donations, which led to massive wastes in vaccines, especially of Astrazeneca vaccines in Canada (Rabson, 2021, par. 5).

Through this initiative's goal for vaccine equity, it has been criticised for their lack of transparency and "its incapacity to deliver on its promises" (Storeng et al., 2021, p. 14). Yet, Canada continued to donate vaccines through its services, with them helping with 21 out of the 27 foreign vaccine distributions between July 4th, 2021 and February 16th, 2022 (*Canada's international vaccine donations*, 2022, table 1) (see Appendix III). On top of it all, the emergence of the BA.2 variant in Asia and Europe serves as a reminder that this pandemic is far from over, which puts the WHO in a capricious position. Their current focus on the sciences behind this variant could be useful in the future, but this focus does little to help LICs in need of more vaccines (*COVAX: A broken promise for vaccine equity*, 2022, par. 3 to 5). Now more than ever, their past failures are being felt throughout the world.

For the future of the WHO and its coalition with Canada Covid-wise, the biggest issue is the recognition of Medicago's vaccine. In addition to its connections with Philip Morris, Medicago has not proven itself as effective as most of the vaccines currently approved (Khandekar, 2022, par. 9). Still, as the world's first plant-based Covid-19 vaccines, it could be a powerful and easily-manufactured alternative to current vaccines (Gretler, 2022, par. 4).

Bangladesh : A Mini Case Study

On December 19th, 2021, Canada sent its biggest donated vaccine shipment yet. It was composed of over 2.2 million doses of the AstraZeneca vaccine, sent directly from its manufacturer in Baltimore, United States, to Bangladesh. Albeit this great achievement, many current events and affairs create blockades regarding this issue.

First, while Canada has a population of 4.24 people per square kilometre, Bangladesh has one of 1265, meaning its population's density is 298 times stronger. In the current context, this means greater chances of COVID spreading (Szmigiera, 2022 table 1). In addition, Bangladesh' GDP per capita is ranked 149 out of 193 countries, meaning resources are more scarce as well (Koop, 2021, table 4). On the one hand, Bangladesh has a Political Stability Index of -0.92 (from -2.5 to 2.5), a Fragile State Index of 85 (from 0 to 120) and a Human Development Index of 0.63 (from 0 to 1), yet they have all drastically improved since 2014 (The Global Economy, 2020, tables 82, 345, 386) . In brief, although Bangladesh has overall improved over the past decade, it is still a place of instability and poor resources. This meant a need for vaccines in Bangladesh, as cases would spike during waves, leading to massive amounts of deaths, most of which are undocumented (Akanda & Ahmed, 2020, p. 4).

During August of 2021, Bangladesh, along with other LICs, accordingly became a country open for the race of vaccine equity. While, during the first half of 2021, vaccines were mostly distributed and monopolised by Western countries, such as the US and the UK, other Non-Western global superpowers were developing vaccines of their own. Therefore, during this time, Bangladesh relied on the COVAX initiative for their vaccines, which turned out to be very unsatisfactory. Then, when Russia, China and India developed their own vaccines, LICs like Bangladesh started negotiating lower-cost vaccines with them. This itself became a race, while both sides started donating massive amounts of vaccines to keep demands high on both sides (Liu & Chung, 2021, par. 3 to 6). In Bangladesh, fist-dose vaccination rates jumped from 3.7% on July 24th to 24.5% on October 24th. In 2022, this

race continues, as of February 22nd, 62.8% of Bangladeshis have their first dose. (Ritchie et al., 2022, table 1). Through this push, though, many Bangladeshis have started doubting the safety of vaccines, along with many people around the globe. This has led to dangerous situations, notably two major Facebook groups supporting the Canadian Trucker Convoy being run by groups located in Bangladesh (Collins, 2022, par. 4).

Yet, Canada's role in Bangladesh is currently minimal at best. With their donations currently only representing 0.98% of Bangladesh's total vaccines, what seems like a big donation from Canada is quite small compared to other countries' participation in Bangladesh's efforts to counter Covid-19. Still, the possible widespread approval of Canada's new vaccine could mean better direct help in the future, but only if Canada is able to convince other countries of its efficacy and security. Currently, Canada is still the only country where Medicago's vaccine is approved (*Medicago: COVID19 Vaccine Tracker*, 2022, Table 1).

In conclusion, with the rise of the BA.2 Omicron variant, vaccination rates must be pushed up, especially in LICs with high rates of people per capita, such as Bangladesh. Yet, with the privatisation of many vaccines and the hoarding this comes with, as well as the misinformation pushing large rates of mistrust for vaccines (especially those manufactured in China, India and Russia), vaccination rates have become unsteady (Rauf, 2022, par. 3; Nogrady, 2021, par. 1). It is therefore in Canada's best interest to continue to donate vaccines to countries such as Bangladesh in whatever way possible. The arrival of Medicago's vaccine would be a more direct way to help in this effort, yet this vaccine is still very recent in the market. Without recognition from the WHO, it would be harder for Canada to convince the international community that Medicago is worth investing in and accepting donations.

Future Developments

Regarding the future of foreign COVID-19 vaccine donations from Canada, especially after the Omicron wave, it is likely that Canada will ramp up distribution. As more than 75% of Canadians are in favour of such policies, it is unlikely that Canadians themselves will oppose such moves (Colledge, 2022, par. 1). With recent critiques from LICs added to the problem, the Trudeau administration will most probably take the Idealist route towards better vaccine equity. The probable long-term outcome could possibly just be a repetition of this past Omicron wave yet again at the next one : promises towards foreign donations being reversed once Canadians need their fourth dose.

Another outcome that would be less likely is an acceptance of the Russian, Indian and Chinese vaccines throughout Canada, which, in most cases, cost less (between 2 and 10$ each) than the widely used Moderna (30$) and Pfizer (20$) vaccines. This would mean better vaccination equity around the globe, as Western-based manufacturers have inflated their prices, even for LICs (Terry, 2021, par. 15 to 24).

Medicago's Covifenz vaccine may shine a new light on Canada. If accepted, this vaccine could not only be sold on the international market, but also used in distributing vaccine donations, through the COVAX initiative or independently, to the countries that need it the most, many of which are LICs. The vaccine's standing as the first plant-based Covid vaccine could also help attract new investors, as this technology is innovative and is less likely to lead to the current production issues (*Plant-Based Vaccines?*, 2022, par. 7). However, the WHO's reticence to recognize it could lead to an international restraint against the vaccine. For now, Canada can only continue to pressure the WHO, insisting on the urgency of the situation in the rise of the BA.2 variant (*Stupidity: WHO May Reject Medicago*, 2022, par. 15-16).

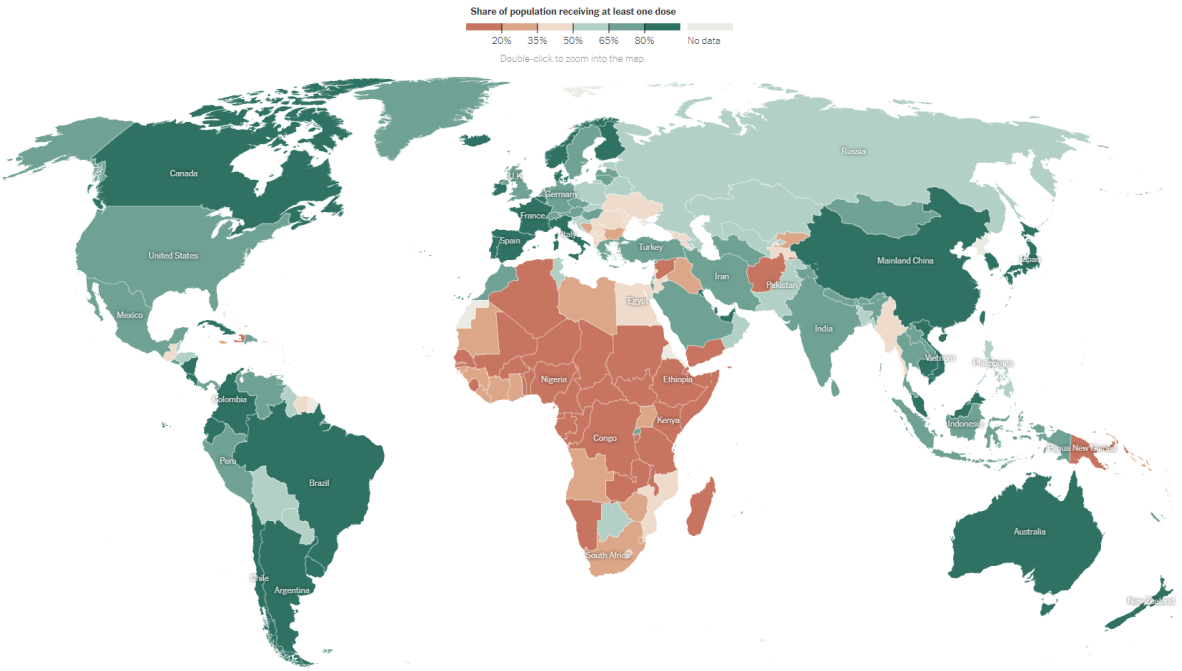
Yet, when it comes to the infamous COVAX initiative, it is still unclear what will be the outcome of their mission. On the one hand, on February 23rd, 2022, COVAX exceeded

demand for the first time, leading to a global vaccinated population rate of 64.2% as of February 25th, 2022. This brings an optimistic view that the WHO may indeed vaccinate 70% of the population by June of 2022, as promised (Guarascio & Rigby, 2022, par. 5; World Health Organisation, 2021, par. 6). On the other hand, COVAX remains a procurement-based initiative, meaning it continues to hold major issues regarding distribution. Therefore, even if Canada boosts its donations to meet its promises, distribution errors that have happened in the past could happen once more (Akhtar, 2022, par. 17). There are two solutions to this : major efforts and help from HICs, which seem slightly unlikely (*What is COVAX*, 2021, par. 20); and a reform of the entire initiative, which, albeit its even bigger unlikeliness, has been discussed in the past within academic circles (de Bolle, 2021, par. 1).

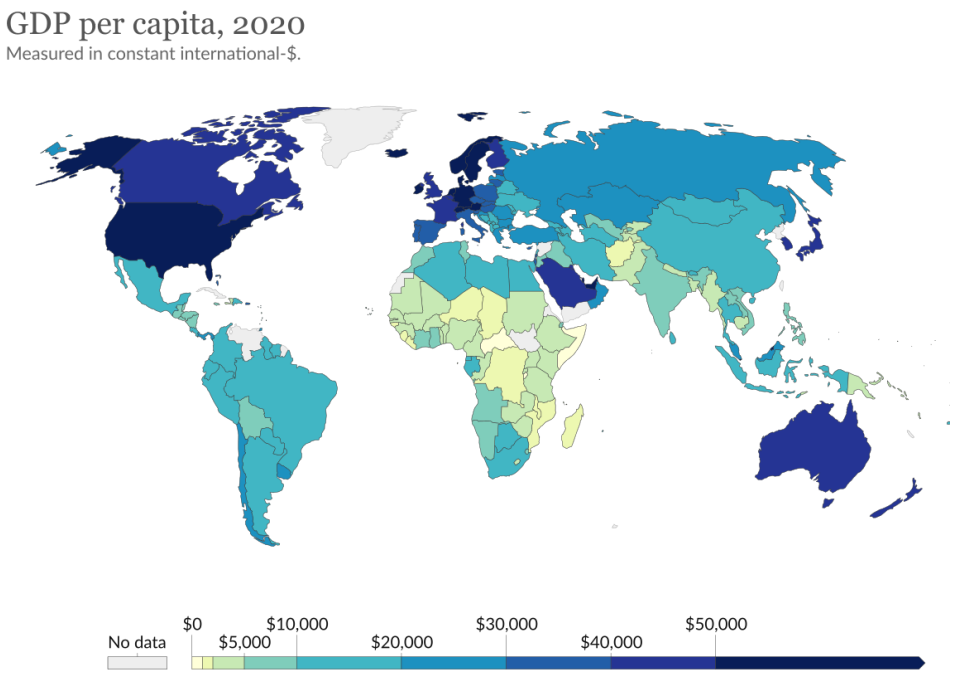
Therefore, Canada is faced with a choice : will it continue to support the COVAX initiative, despite its criticisms and failures, or will it focus on a new way to support vaccination in LICs, perhaps taking the matter of Medicago’s international recognition and distribution into their own hands?

Appendix

I. Share of Population Receiving at Least One Dose (Holder, 2022, table 1)

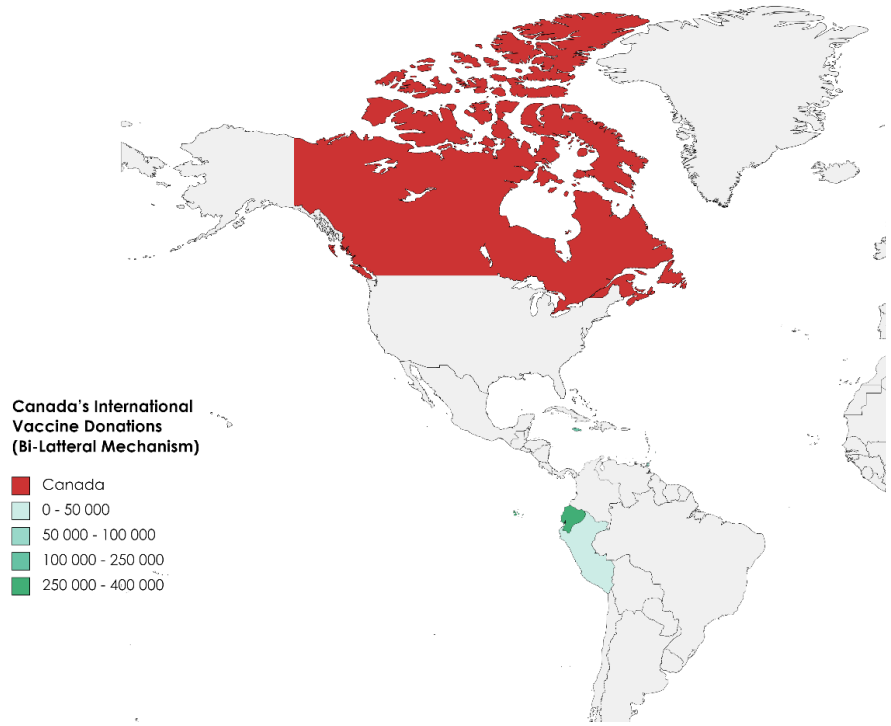


II. GDP per capita, 2020 (Oxford Martin School, 2020, table 1)

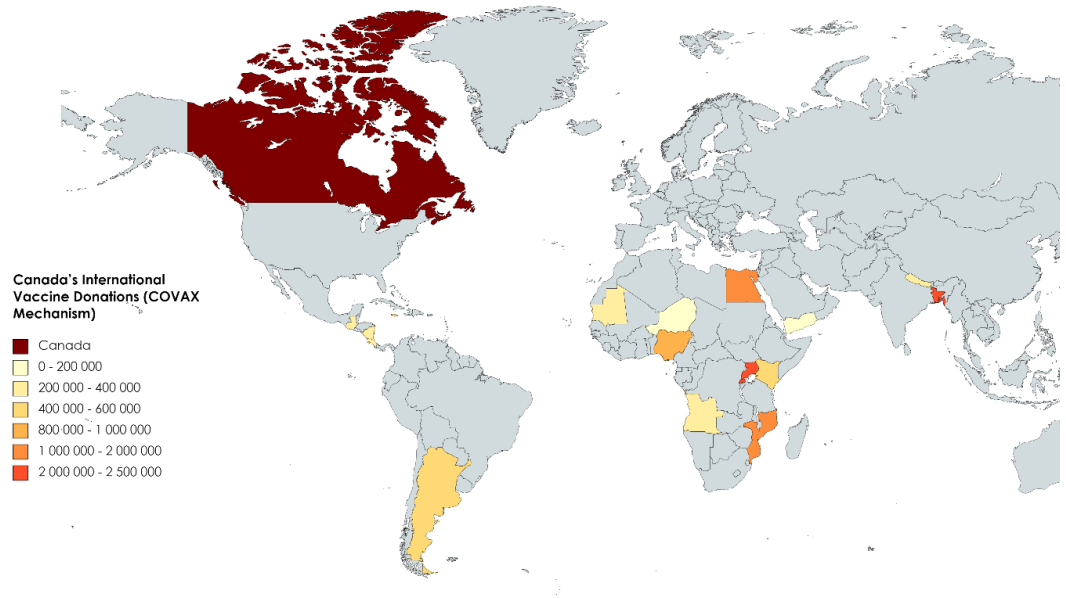


III. Canada's International Vaccine Donations

A. Bi-Latteral Mechanism



B. COVAX Mechanism



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RESEARCH Open Access

How successful Bangladesh is in controlling the coronavirus pandemic?

Ayatullah Al Musabi Akanda[1] and Redwan Ahmed[2*]

Abstract

Background: The reported number of COVID-19 patients increases on average along with the increased laboratory tests in Bangladesh implying a possibility of the spread of deadly coronavirus being out of control. Contrary to that, the government claims that it controls the spread of coronavirus through undertaking stringent policy measures. This different scenario leads this study on whether these measures have any positive impact on controlling the pandemic.

Results: The results show that simulated number of patients (without policy measures) surpassed the actual number of patients (with policy measures) from the first week of July 2020 which may provide a signal about the positive impact of policy measures taken by the government.

Conclusion: This study concludes that policy measures taken by the government are useful to some extent in controlling the coronavirus pandemic. As this pandemic lingers, people may lose their patience to stay at home. Consequently, some of the policies need further correction and change.

Keywords: COVID-19, SEIRD model, Simulation, Coronavirus, Pandemic

Background

In December 2019, world experienced a new form of SARS-COV-2 virus in Wuhan city at the Hubei Province of China, which created COVID-19 disease (Li et al. 2020b). On January 30, 2020, WHO declared it as the Public Health Emergency of International Concern 'PHEIC' and subsequently as a pandemic on March 11, 2020 (Sohrabi et al. 2020). As of August 27, 2020, this virus spread over more than 213 countries and territories affecting 24,628,607 people, in which a total of 17,094,634 people gets recovered, 6,698,336 are still active cases, and death number rises to 835,637.[1] This disease is highly infectious, and the growth rate of it follows the exponential curve, which is higher than the previously detected epidemic such as SARS and MERS (Peeri et al. 2020). Till today no effective and safe medicine is available, and all potential COVID-19 vaccines are under investigation (Campbell 2020). However, confinement is one of the best ways to slow it down (SCL Health 2020).

On March 07, 2020, this transmissible disease first detected in Bangladesh, the most densely populated country globally with more than one hundred sixty million in total living in an area of 147,570 km^2 (Islam 2009). As a result, it creates a situation of a grievous threat for Bangladesh, where health facilities are not enough for the vast population. The density of the population, different transmission mechanisms depending on how far the virus could move through air and how long it could live in different surfaces, and the absence of vaccination make it challenging to deal with this disease (Cooper et al. 2020). Challenge in testing may cause infected people unnoticed (Salathé et al. 2020) and put others at risk (Roser et al. 2020), which could be minimized by enormous testing (Salathé et al. 2020). Combined with widespread testing and contact tracing, lockdown can subdue the pandemic (Giordano et al. 2020). Socioeconomic conditions may play a role of being tested and treated (Borjas 2020),

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[1] https://www.worldometers.info/coronavirus/.

COVID-19: a brief history and treatments in development

STEVE CHAPLIN

Coronavirus disease (COVID-19) is now dominating the lives of everyone, and its history is constantly being rewritten. This article gives a brief account of the story so far: where SARS-CoV-2 might have originated, how it compares with other viruses that cause major respiratory disease, and some of the treatments and vaccines currently being investigated to combat it.

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On 31 December 2019, the World Health Organization (WHO) was formally notified about a cluster of cases of pneumonia in Wuhan City, home to 11 million people and the cultural and economic hub of central China. By 5 January, 59 cases were known and none had been fatal.[1] Ten days later, WHO was aware of 282 confirmed cases, of which four were in Japan, South Korea and Thailand.[2] There had been six deaths in Wuhan, 51 people were severely ill and 12 were in a critical condition. The virus responsible was isolated on 7 January and its genome shared on 12 January.[3] The cause of the severe acute respiratory syndrome that became known as COVID-19 was a novel coronavirus, SARS-CoV-2. The rest is history, albeit history that is constantly being rewritten: as of 12 May, 82,591 new cases of COVID-19 worldwide were being confirmed daily and the death rate was over 4200 per day.[4]

Coronaviruses in man

Phylogenetic analysis suggests that SARS-CoV-2 originated in animals, probably bats, and was transmitted to other animals before crossing into humans at the Huanan wet market in Wuhan City.[5,6] There is some evidence that the intermediate vector may have been pangolin, a type of nocturnal anteater imported illegally for its flesh. This animal carries a coronavirus that is very similar to SARS-CoV-2 but differs in a crucial region that determines viral infectivity and host range. It is therefore possible that the virus passed into humans and then, through adaptation as it infected more people, mutated to acquire the characteristics that made it spread so quickly.

SARS-CoV-2 is not the first coronavirus to cause outbreaks of respiratory infection in humans. Six others have been identified so far, all believed to have originated in animals.[6,7] The four coronaviruses that are now endemic in humans cause 10–15% of common colds, mostly peaking between December and April

News in focus

ALEXANDER NEMENOV/AFP/GETTY

Vials of the Sputnik V COVID-19 vaccine pass along a production line at a manufacturing facility near St Petersburg, Russia.

MOUNTING EVIDENCE SUGGESTS SPUTNIK COVID VACCINE IS SAFE AND EFFECTIVE

Sputnik is in use in nearly 70 nations, but its adoption has been slowed by questions over rare side effects, and it has yet to garner World Health Organization approval.

By Bianca Nogrady

Russia's COVID-19 vaccine, Sputnik, has been the subject of fascination and controversy since the Russian government authorized its use last year, before trial results had even been published. Evidence from Russia and many other countries now suggests it is safe and effective — but questions remain about the quality of surveillance for possible rare side effects.

Sputnik V was the first COVID-19 vaccine to be registered for use in any nation, and it has since been approved in 67 countries, including Brazil, Hungary and India. But the vaccine — and its one-dose sibling Sputnik Light — is yet to be approved for emergency use by the European Medicines Agency (EMA) or the World Health Organization (WHO). WHO approval is crucial for distribution through the COVID-19 Vaccines Global Access (COVAX) initiative, which provides doses for low-income nations.

Developed by scientists at the Gamaleya National Research Center of Epidemiology and Microbiology in Moscow, the vaccine was authorized for use by the Russian Ministry of Health on 11 August 2020, more than a month before phase I and II trial results were published, and before the phase III trial had even begun.

Scientists greeted Russian President Vladimir Putin's announcement of the registration with outrage. "If the government's going to approve a vaccine before they even know the results of the trial, that does not build confidence," said epidemiologist Michael Toole at the Burnet Institute in Melbourne, Australia.

Some of that concern was allayed when the phase III trial results[1], published in February by the vaccine's developers, suggested that it is 91.6% effective at preventing symptomatic COVID-19 infection and 100% effective at preventing severe infection. However, some scientists criticized the authors for failing to provide access to the full raw data from the early-stage trials, and also voiced concerns

The Century of mRNA Vaccines: COVID-19 Vaccines and Allergy

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Palabras clave: Vacuna COVID-19. Coronavirus. Alergia. PEG. Excipientes de vacuna.

To the Editor:

On December 2, 2020, the COVID-19 mRNA BNT162b2 vaccine was approved by the Medicines and Healthcare products Regulatory Agency (MHRA). Six days later, the UK began mass vaccina-tion. Only 24 hours later, Dr June Raine, Chief Executive of the MHRA, issued updated guidance to COVID-19 vaccination centers about the management of anaphylaxis following 2 reports of ana-phylaxis and 1 report of a possible allergic reaction following immunization. The guidelines state verbatim. "Any person with a history of anaphylaxis to a vaccine, medicine or food should not re-ceive the Pfizer/BioNTech vaccine. A second dose should not be given to anyone who has experi-enced anaphylaxis following administration of the first dose of this vaccine." [1]. The present letter is a response to the consternation caused by the first part of this sentence in the Spanish allergology community.

Basic and clinical research into mRNA vaccines has increased dramatically. Most of the early work in mRNA vaccines focused on cancer applications. Similarly, a number of recent reports demon-strated the potency and versatility of mRNA for protection against a wide variety of infectious pathogens, including parasites and, of interest today, coronavirus 2 (SARS-CoV-2) [2-4].

mRNA vaccines are safe because mRNA is a noninfectious, nonintegrating platform with no poten-tial risk of infection or insertional mutagenesis. The various modifications make mRNA more stable and highly translatable [5,6]. mRNA vaccines have the potential for rapid, inexpensive, and scalable manufacturing, mainly owing to the high yields of in vitro transcription reactions [2].

The COVID-19 mRNA vaccine BNT162b2 manufactured by Pfizer/BioNTech is a highly purified single-stranded, 5'-capped messenger RNA (mRNA) produced by cell-free in

Table. Recommendations for Administration of COVID-19 mRNA Vaccines to Allergic Patients[a]

	Proceed With Vaccination	Precautions for Vaccination	Contraindications to Vaccination
	– History of allergy to food, latex, insect venom, and aeroallergens – History of drug allergy – Mild allergic reactions to vaccines or other injectable medications (ie, no anaphylaxis) – Family history of anaphylaxis	– History of severe allergic reaction[b] to food, latex, insect venom, or aeroallergens. – History of severe drug allergy[b] – History of severe allergic reaction[b] to another vaccine (not including currently authorized mRNA vaccines) – History of mastocytosis, mast cell activation syndrome, idiopathic anaphylaxis. – Moderate/severe acute illness – Pregnancy and breastfeeding	– History of severe allergic reaction[b] to any component of the currently authorized COVID-19 mRNA vaccines
Actions	– 30-minute observation period	– Risk assessment – Additional counseling – Potential deferral of vaccination – 45-minute observation period if vaccinated	– Do not vaccinate

[a]Modified from Centers for Disease Control guidelines for vaccination of allergic patients.
The SARS-CoV2 vaccines should be administered in a health care setting, where anaphylaxis can be treated.
[b]Severe allergic reaction, eg, anaphylaxis.

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ORIGINAL RESEARCH ARTICLE

Is There Broad-Based Support in High-Income Countries for COVID-19 Vaccine Donation? Evidence from Seven Countries

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Abstract

Background Many high-income countries (HICs) have now vaccinated a substantial proportion of their population against COVID-19. Many low-income countries (LICs) may need to wait until at least 2022 before even the most vulnerable 20% of their populations are vaccinated. Beyond ethical considerations, some redistribution of doses would reduce the risk of the emergence and spread of new variants and benefit the economy, both globally and in donor countries. However, the willingness of HIC governments to donate vaccine doses is likely to depend on public support. While previous work has indicated strong average levels of public support in HIC for donation, little is known about how broad-based this support is.

Objective To investigate the extent to which support for donation holds across both pre-specified and exploratory subgroups.

Methods From 24 November–28 December 2020 we conducted an online survey of 8209 members of the general public in seven HIC (Australia, Canada, France, Italy, Spain, UK and USA). We conducted tests of proportions and used Bayesian ordinal logistic regression models to assess the extent of support for donation across population subgroups.

Results We found broad-based support for donations in terms of age, gender, socio-economic status and political ideology. We found no strong evidence that support for donations was higher among those with greater income or a university education. Support for donation among those on the political right and centre was lower than on the left, but 51% (95% confidence interval 48–53%) of respondents who identified with the right supported some level of donation. Those in the more altruistic half of the sample (as captured by willingness to donate money to a good cause) were more likely to support donation than those who were not, but around half of the less altruistic group supported some level of donation.

Conclusion There is broad-based support for policymakers in HICs to donate some of their countries' COVID-19 vaccine doses for distribution to LICs.

Key Points for Decision Makers

Previous research has found high average levels of support among the general public in high-income countries for donating COVID-19 vaccine doses to low-income countries, but little is known about how broad-based this support is.

This study investigated the extent of support for donation in seven high-income countries across several subgroups.

Our results suggest broad-based support for donations in terms of age, gender, socio-economic status and political ideology.

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COVAX and the rise of the 'super public private partnership' for global health

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