



# LONG SHOT

Aiming to Reduce  
Vaccine Hesitancy

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# **Long Shot**

## **Aiming to Reduce Vaccine Hesitancy**

**Caribbean Policy Research Institute (CAPRI)**  
**Kingston, Jamaica**

**This study is co-funded by Bluedot Insights.**

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# Table of CONTENTS

	Executive Summary	iv
1	Introduction	4
2	Jamaica's Vaccination Efforts	8
3	Vaccine Uptake around the World	12
4	Review of Existing Knowledge	16
5	Survey Findings	24
6	Conclusion and Recommendations	30
	Appendix 1: The Survey	33

## List of Figures and Tables

Figure 1	Share of Population with at Least One Vaccine Dose (Caribbean Region)	6
Figure 2	Share of Population with Two Vaccine Doses	13



## Executive Summary



Jamaica is almost certain to fail to reach the desired goal of

**vaccinating**

**65%**

**of the population**

by March 31, 2022

It is incontrovertible that the COVID-19 vaccine mitigates the impact of the virus on those who contract it. Safe and effective COVID-19 vaccines were available in Jamaica one year into the COVID-19 pandemic. Mass vaccination is considered to be the country's best option out of the pandemic. By attaining herd immunity, the spread of the virus will be curtailed, there will be fewer deaths and lower morbidity, and people will be able to attempt to restore and maintain livelihoods.

Jamaica began its COVID-19 vaccination programme in March 2021, but Jamaica's vaccination rate is the second lowest in the Caribbean region, and despite an adequate supply of vaccines, demand remains low. Jamaica is almost certain to fail to reach the desired goal of vaccinating 65 percent of the population by March 31, 2022.

Why the uptake of vaccines in Jamaica is so low is unknown. There are suggestions and speculations, but no evidence-based conclusion has yet been proffered. As such, this study, through a survey of a cross-sectional sample of 1170

participants across Jamaica, determines:

1. The underlying factors that contribute to low vaccine uptake in Jamaica, and
2. The psychographic and demographic profile of those who are reluctant to take the vaccine.

The survey results produced a predominant profile of the vaccine hesitant Jamaican as a young, low income person (more likely male than female but not significantly so), who did not finish primary school, is not religious, is not complacent but is risk averse, and who does not trust the government or the vaccine. That person is most likely to be convinced by a family member, doctor, or other healthcare worker to take the vaccine, and they prefer to go to a doctor's office or a health centre to get jabbed.

The more discrete aspects of the findings were extrapolated regarding the factors that drive vaccine hesitancy. Younger people are twice as likely to be unvaccinated than older people, though this may not be due to any intrinsic difference in age category, but to their sources of information. Younger people are more likely to get their information

from social media, where conspiracy theories, anti-vaccination campaigns, and speculative discussions about COVID-19 and the vaccine thrive.

Low income and low educational achievement correspond to low vaccine rates in Jamaica, a correlation substantiated in other jurisdictions, where the lower an individual's status, the lower they perceive the risk to be of contracting COVID-19. Educational attainment is a key determinant of COVID-19 vaccination status. Those with less education are less willing to take the vaccine, likely because they may not have access to high-quality information related to the vaccine, and may be less able to understand the information they do have access to, or be subject to misinformation, which is often more digestible. Jamaicans who have less education are twice as likely to not take the COVID-19 vaccine compared to those that have at least completed a university degree. That is a meaningful difference and points to the potential benefit of targeting that demographic using the media and content that will appeal to them.

**Jamaica began its COVID-19 vaccination programme in March 2021, but Jamaica's vaccination rate is the second lowest in the Caribbean region, and despite an adequate supply of vaccines, demand remains low.**

Complacency is also strongly correlated with socioeconomic status, where higher complacency is correlated with lower socioeconomic status, and both are correlated with lower likelihood of taking the vaccine. Complacency fed by misinformation also emerges as a key area to be focused on in efforts to increase vaccination rates.

Trust, or the lack of it, is a major issue. Among the top reasons cited for not taking the vaccine are lack of trust in the government and in the efficacy of the vaccine itself. The historical distrust of government and other traditional institutions of authority cannot be undone in a timeframe that would have any bearing on the trajectory of the pandemic. However, it should be considered with regard to who is disseminating the pro-vaccination message. Public officials should not be the face of a COVID-19 vaccination drive. Respondents said they trust family members or health professionals most with regard to who could persuade them to get vaccinated; thus, it is these groups that should be the messengers of the pro-vaccination message.

Ninety-five percent of the unvaccinated reported that the process of getting vaccinated was inconvenient. This does not necessarily mean that that inconvenience was the binding obstacle to vaccination (only 4 percent stated that a more convenient location would make it more likely for them to take the vaccine) but the high proportion is nevertheless noteworthy. Many of those could very well be unvaccinated primarily because of the other factors discussed in this report – distrust, fear, complacency, etc. Nonetheless, the discovery that so many of the unvaccinated deem it to be inconvenient suggests that the government's efforts to make vaccinations more convenient are still lacking. If even a tenth of the

unvaccinated overcome their reluctance because getting vaccinated becomes convenient, the country's vaccination rate would rise by eight percentage points.

Vaccination against COVID-19, or any communicable disease, is a public health good. The evidence is solid that vaccinations reduce the mortality and morbidity of the COVID-19 virus, which is of benefit not only to those who contract the illness, but to those who would be otherwise displaced from a hospital bed, or whose treatment would be relegated as less important; to the public health system which bears the cost of treating people ill with the disease; and to the national economy which suffers the productivity loss represented by the person's inability to work, and whose recovery is hampered by the continuation of the pandemic and the measures necessary to control it. The government has a legitimate and even obligatory role to procure vaccinations, and promote their uptake, in its provision of public health goods to the population.

Trust, information, and convenience: how these play out among the Jamaican vaccine-hesitant are, according to the data, the three areas that should be considered in efforts to increase vaccine uptake. A high rate of distrust of the government and low confidence in the vaccine undermine the goal set by the government for vaccine coverage in the population. Misinformation abounds, and appears to drive complacency and increase risk aversion, at the same time as people's greatest doubts about the vaccine have to do with its safety, its ingredients, and the side effects. Combatting that misinformation with accessible information that addresses people's concerns about the vaccine should have a positive effect on vaccine uptake. That information should not have the government's or public officials' faces on it. Finally, the more convenient it is to take the vaccine, the more people will

take it. Convenience, for Jamaicans, is receiving the vaccine in a doctor's office or health centre.

Though the study did not directly consider the question of vaccine mandates, the data that was gathered suggests that they may do more harm than good. Given the trust deficit in the government, and the lack of confidence in the vaccine, a vaccine mandate is likely to not only be resisted, but may harden resistance to taking the vaccine, and create openings for fraudulent vaccine certificates, which will then undermine the trustworthiness of all vaccine certification. The World Health Organization (WHO) recommends that mandatory vaccinations in countries should only be used when governments have exhausted all other options to improve vaccination uptake. The data from this study points to what some of these other options might entail.

## Recommendations

1. Create messaging and information packages that are accessible (easy to understand) that specifically speak to the safety of the vaccines, the ingredients of the vaccine, how the vaccine works, and how it was developed so quickly.
2. Emphasise the role of doctors and health care professionals in delivering messages aimed at increasing vaccine take up, as well as encourage vaccinated persons to talk to and persuade their unvaccinated family members to take the vaccine, perhaps through a campaign specific to this objective.
3. Make getting vaccinated more convenient, and make it be seen to be more convenient.
4. Develop a compensation scheme for vaccine-related health complications.

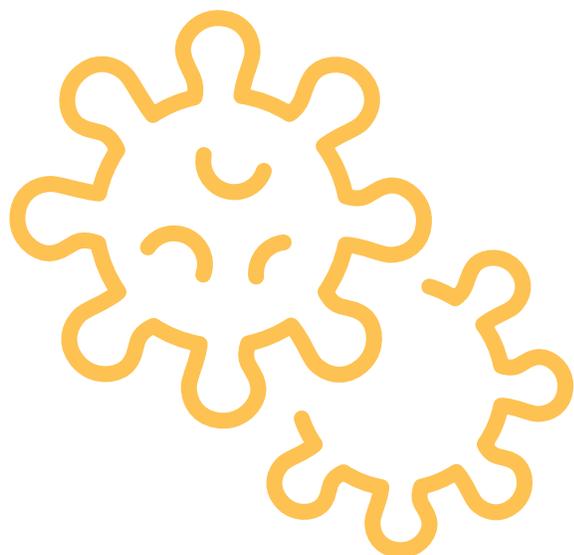
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# 1

## Introduction



During the first

**23 months**

of the pandemic,

**127,163**

cases of COVID-19  
were confirmed

**S**afe and effective COVID-19 vaccines were available in Jamaica one year into the COVID-19 pandemic. It is incontrovertible that the COVID-19 vaccine mitigates the impact of the virus on those who contract it. The international and local epidemiological data support the effectiveness of COVID-19 vaccines in reducing hospitalizations, the severity of the disease, and death. An analysis of Jamaica's hospitalization data shows that the unvaccinated constitute 87 percent of those hospitalized and 98 percent of those who have died from COVID-related complications.<sup>1</sup> In the United States, an unvaccinated person is 14 times more likely to die of COVID-related complications as compared with someone who has two doses of the vaccine, and they are 41 times more likely to die from it than someone who is "boosted."<sup>2</sup>

Despite the infection prevention and control measures Jamaica implemented



from the first COVID-19 case was announced in March 2020, the virus has spread throughout the population and during the first 23 months of the pandemic, 127,163 cases of COVID-19 were confirmed, and 2,750 persons died due to the disease.<sup>3</sup> A consensus has emerged that the restrictive measures are not sustainable in the long term due to the social, mental health, and economic

effects. Instead, mass vaccination is considered to be the country's best option out of the pandemic. By attaining herd immunity, the spread of the virus will be curtailed, there will be fewer deaths and lower morbidity, and people will be able to attempt to restore and maintain livelihoods.

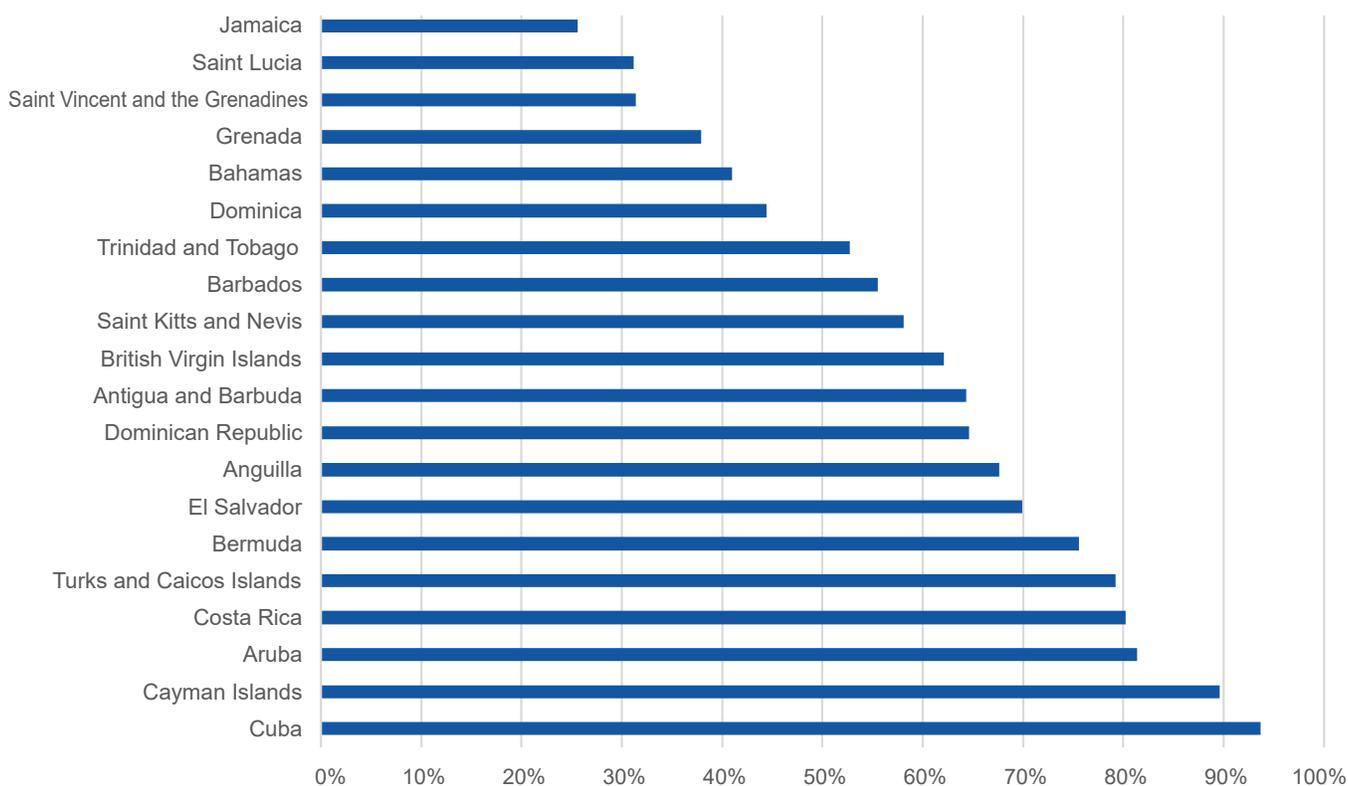
Jamaica began its COVID-19 vaccination

1 Ministry of Health and Wellness, "COVID-19 Clinical Management Summary for Wednesday February 2, 2022," 2022, [www.moh.gov.jm/updates/coronavirus/covid-19-clinical-management-summary/](http://www.moh.gov.jm/updates/coronavirus/covid-19-clinical-management-summary/).

2 Centers for Disease Control and Prevention, "Rates of COVID-19 Cases and Deaths by Vaccination Status," updated daily, retrieved February 21, 2022, <https://covid.cdc.gov/covid-data-tracker/#rates-by-vaccine-status>.

3 MOHW, "COVID-19 Clinical Management Summary."

**Despite the infection prevention and control measures Jamaica implemented from the first COVID-19 case was announced in March 2020, the virus has spread throughout the population.**

**Figure 1: Share of Population with at Least One Vaccine Dose (Caribbean Region)**

*Source: Our World In Data, February 21, 2022*

programme in March 2021; at the eight-month mark, the milestone of one million doses administered (to its population of three million) was reached.<sup>4, 5</sup> Notwithstanding that figure, Jamaica's vaccination rate is the second lowest in the Caribbean region, and despite an adequate supply of vaccines, demand remains low (see Figure 1).

Based on the current supply and procurement efforts of the Government of Jamaica, it is expected that vaccines will be available to all those who wish to

be inoculated. However, given the low uptake of COVID-19 vaccines, Jamaica may fail to reach the desired goal of vaccinating 65 percent of the population by March 31, 2022.<sup>6</sup> The relevant authorities should therefore urgently devise strategies to encourage greater vaccine uptake.

Why the uptake of vaccines in Jamaica is so low is unknown. There are suggestions and speculations, but no evidence-based conclusion has yet been proffered. As such, this study determines:

This study mainly comprises a survey of a cross-sectional sample of 1170 participants across Jamaica, 562 males and 608 females. A desk review of relevant journal articles, including articles posted on websites pertaining to public health, epidemiology, and specifically the COVID-19 pandemic, and traditional media content garnered existing information which was parsed for this report. (Detailed methodology of the survey and sample are in Appendix I.)

4 Ministry of Health and Wellness, "National COVID-19 Vaccine Deployment and Vaccination Interim Plan," 2021, [www.moh.gov.jm/wp-content/uploads/2021/02/Interim-COVID-19-Vaccine-Plan.pdf](http://www.moh.gov.jm/wp-content/uploads/2021/02/Interim-COVID-19-Vaccine-Plan.pdf).

5 Ministry of Health and Wellness, "One Million Doses of COVID-19 Vaccines Administered in Jamaica," November 7, 2021, [www.moh.gov.jm/one-million-doses-of-covid-19-vaccines-administered-in-jamaica](http://www.moh.gov.jm/one-million-doses-of-covid-19-vaccines-administered-in-jamaica).

6 Ministry of Health and Wellness, "Interim Vaccination Logistics: From the Vial to the Arm," 2021, [www.nerha.gov.jm/pdf/Interim-Vaccination-Implementation-Plan-02.03.2021-Final.pdf](http://www.nerha.gov.jm/pdf/Interim-Vaccination-Implementation-Plan-02.03.2021-Final.pdf).



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# 2

## Jamaica's Vaccination Efforts



A PAHO study  
found that only

**35%**

of Jamaicans were  
**willing to  
take the vaccine**

In January 2021, the Cabinet of Jamaica approved the “National COVID-19 Deployment and Vaccination Interim Plan” as the guide for Jamaica’s COVID-19 vaccine programme. It outlines all the actions to be taken to introduce COVID-19 vaccines.<sup>7</sup> The plan stipulates that Jamaica administer vaccines approved by the WHO. As of March 2022, four vaccines are being administered in Jamaica: AstraZeneca, Johnson and Johnson, Pfizer, and Sinopharm.<sup>8</sup>

The Ministry of Health and Wellness also created an “Interim Vaccination Logistics Plan” for the deployment and distribution of COVID-19 vaccines, with three phases. The plan’s objective was to vaccinate 65 percent of the population or approximately 1.7 million persons by March 31, 2022.<sup>9</sup> In the first phase, all individuals who were deemed especially



The vaccination programme began in March 2021, and, by the end of that year

**1,198,014**

**doses of the COVID-19 vaccine**

had been administered

exposed or vulnerable were given access to vaccinations: government officials; health care workers; the elderly; members of the Jamaica Defence Force (JDF), the Jamaica Fire Brigade (JFB), and the Jamaica Constabulary Force (JCF); employees of schools<sup>3</sup>; employees of the

Department of Correctional Services (DCS) and of the Passport Immigration and Citizen Agency (PICA); and doctors and nurses. Some quarter million persons were expected to be vaccinated in this phase. In phase two, individuals essential to economic activity such as public sector workers, hotel workers, and members of the transportation sector, manufacturing sector, banking sector, and agricultural sector were to be vaccinated. The total expected to be vaccinated in this phase was just over half a million. The last phase is the remaining population, comprising 1.2 million individuals.

The vaccination programme began in March 2021, and, by the end of that year, 1,198,014 doses of the COVID-19 vaccine had been administered, encompassing the three phases.<sup>10</sup> As of March 2022, less than 30 percent of the population eligible for vaccination was

<sup>7</sup> Latonya Linton, “Cabinet Approves COVID-19 Deployment and Vaccination Interim Plan,” Jamaica Information Service, January 20, 2021, <https://jis.gov.jm/cabinet-approves-covid-19-deployment-and-vaccination-interim-plan>.

<sup>8</sup> MOHW, “National COVID-19 Vaccine Deployment and Vaccination Interim Plan.”

<sup>9</sup> MOHW, “Interim Vaccination Logistics.”

<sup>10</sup> Ministry of Health and Wellness, “No Vaccination Activity for the Holiday Weekend,” December 24, 2021, [www.moh.gov.jm/no-vaccination-activity-for-the-holiday-weekend](http://www.moh.gov.jm/no-vaccination-activity-for-the-holiday-weekend).

**Less than 30 percent of the population eligible for vaccination has been vaccinated. This is below target, despite vaccine availability, the provision of approximately 55 fixed vaccination sites, and private sector entities offering the vaccine to their staff.**

fully vaccinated.<sup>11</sup> This is below target, despite vaccine availability, the provision of approximately 55 fixed vaccination sites,<sup>12</sup> and private sector entities offering the vaccine to their staff and their staff members' families.<sup>13</sup>

This low uptake was expected: a Pan American Health Organization PAHO study (conducted before the vaccination programme began) found that only 35 percent of Jamaicans were willing to take a COVID-19 vaccine.<sup>14</sup> Of all the countries surveyed (in the Americas), Jamaica's projection was the lowest. In October 2021, the government had to dispose of 169,000 doses of the AstraZeneca vaccine valued at J\$100 million, and over 40,000 persons due their second doses of COVID-19 vaccines did not turn up for appointments.<sup>15</sup>

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In anticipation of the predicted low vaccine uptake, the interim plan included a social behaviour change communication programme to be developed and rolled out from February to October 2021 period. The objectives of the communication plan were to

build public confidence in the approval/ authorization process, safety, and efficacy of COVID-19 vaccines.<sup>16</sup> Despite the various efforts, however, there is no sign that vaccine hesitancy has abated, and the COVID-19 recovery effort remains in jeopardy.

11 Pan American Health Organization, "COVID-19 vaccine doses administered in the Americas," accessed March 3, 2022, [https://ais.paho.org/imm/IM\\_DosisAdmin-Vacunacion.asp](https://ais.paho.org/imm/IM_DosisAdmin-Vacunacion.asp).

12 "MOHW Establishes 55 Fixed Sites to Allow for More Access to Vaccines," Loop News, September 18, 2021, <https://jamaica.loopnews.com/content/mohw-establishes-55-fixed-site-allow-more-access-vaccines>.

13 Alecia Smith, "Gov't Partners with Private Sector to Accelerate Access to COVID-19 Vaccines," Jamaica Information Service, February 17, 2021, <https://jis.gov.jm/govt-partners-with-private-sector-to-accelerate-access-to-covid-19-vaccines/>.

14 MOHW, "National COVID-19 Vaccine Deployment and Vaccination Interim Plan."

15 Abigail Bartley, "Jamaica Set to Dump More Than \$100 Million Worth of AstraZeneca Vaccines," *Nationwide News Network*, October 28, 2021, <https://nationwideradiojm.com/jamaica-set-to-dump-more-than-100-million-worth-of-astrazeneca-vaccines/>.

16 MOHW, "National COVID-19 Vaccine Deployment and Vaccination Interim Plan."





Yevgen Belich / Shutterstock.com

# 3

## Vaccine Uptake Around the World



In countries with  
vaccination rates below

# 30%

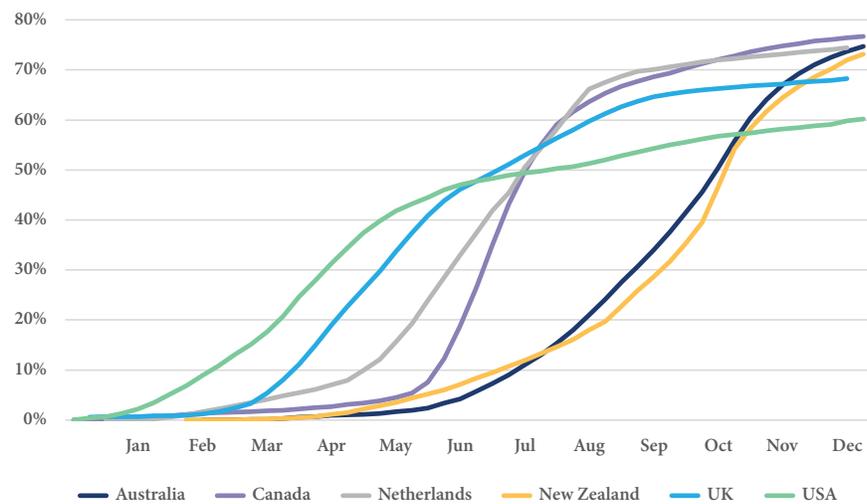
persons with access to  
social media were

**4x more likely**  
TO BE VACCINE-HESITANT

Global experience suggests that the factors that govern vaccine uptake are not only complex but dynamic. Countries that at one point enjoyed high vaccination rates have, over the months after vaccinations were introduced, fallen below other countries' rates. Figure 2 shows vaccination trends in 11 countries that led the vaccination "race" at the outset of vaccinations, in early 2021.

The experience with COVID-19 vaccinations in the year since they were first introduced suggests that no single factor—not wealth, nor vaccine availability—provides an adequate, cross-cutting determination of a country's people's willingness to be vaccinated. The changing ranking of vaccination rates cannot be explained by a single factor but by several interdependent factors such as convenience, complacency, and confidence. Additionally, factors related to the flow of information and misinformation surrounding vaccination, and the politicisation of the issue can have a detrimental effect on vaccine uptake.

**Figure 2: Share of Population with Two Vaccine Doses**



**Source:** Arnav Shah, Shanoor Seervai, and Eric C. Schneider, "How Can the U.S. Catch Up with Other Countries on COVID-19 Vaccination?" *To the Point* (blog), Commonwealth Fund, Dec. 15, 2021, <https://doi.org/10.26099/961a-9039>.

Both misinformation and politicisation were at play in the United States, as it went from being among the countries with the highest vaccination rates (figure 2) to having the lowest by the end of 2021. In tandem with that decline was the growth in circulation of misinformation about vaccines. Furthermore, vaccination became an issue in the US' "culture

wars," which further stalled vaccination uptake. Globally, misinformation has been cited as a major factor in fuelling vaccine hesitancy. In countries with vaccination rates below 30 percent, such as South Africa, it was found that persons who have access to social media were approximately four times more likely to be vaccine-hesitant than those who do

The factors that govern vaccine uptake are not only complex but dynamic. Countries that at one point enjoyed high vaccination rates have, over the months after vaccinations were introduced, fallen below other countries' rates.

not utilize social media.<sup>17, 18</sup>

In Jamaica both political parties are strong advocates of vaccination, and so the politicization effect has not come into play. The spread of misinformation has been and remains an issue, however, although the extent to which affects Jamaicans' views on vaccinations, and their willingness to take the vaccine, has thus far not been well examined.

## Vaccine Mandates

In the face of vaccine hesitancy, several countries around the world have adopted vaccine mandates, essentially forcing

their citizens to be inoculated. A vaccine mandate is any requirement by a state authority that requires people to be vaccinated. Refusing to be vaccinated may be against a law, if one exists, and usually denies the unvaccinated person access to certain goods, services, and places. For example, in Jamaica, there are a series of vaccinations that children must take in order to attend school. A vaccine mandate can also take the form of fines for not getting vaccinated.<sup>19</sup> The rationale behind mandates has to do with the direct reduction of the burden of disease, as well as the mitigation of the spill-over effects of lower infection rates to the economy.

France drove up its vaccination rate, virtually overnight, with the announcement that only vaccinated persons would be allowed entry to restaurants, cafes, and shops; 1.3 million people signed up for vaccination the following day. Italy, which early in the pandemic was in the world's spotlight for having the highest infection and fatality rates, obligates all employees, public and private sector, to be vaccinated at the threat of losing their jobs. In the United States, some cities and municipalities that have made it a requirement for entry to certain public places (eg New York City, Los Angeles) have seen an uptick in

17 "Coronavirus (COVID-19) Vaccinations," Our World in Data, 2021, <https://ourworldindata.org/covid-vaccinations>.

18 Neia Prata Menezes et al., "What is Driving COVID-19 Vaccine Hesitancy in Sub-Saharan Africa?" World Bank Blogs, August 11, 2021, <https://blogs.worldbank.org/african/what-driving-covid-19-vaccine-hesitancy-sub-saharan-africa>.

19 Rosa Hodgkin, "Vaccine Mandates," Institute for Government, n.d., updated February 1, 2022, [www.instituteforgovernment.org.uk/explainers/vaccine-mandates](http://www.instituteforgovernment.org.uk/explainers/vaccine-mandates).



vaccine uptake since the imposition of the mandate.<sup>20</sup>

There are several considerations that any government, including the GOJ, must examine in thinking about a vaccine mandate. The extent to which a mandate might be effective in Jamaica cannot be inferred from the European or North American cases. It must consider that although COVID-19 vaccines are widely regarded as safe and efficacious, a small portion of the population may be at risk of experiencing vaccine-related harm. To date, there is no compensation scheme for individuals who experience serious adverse post-vaccination ailments. Should someone suffer a poor reaction to the vaccine, their only recourse is through the courts. Where Jamaica's court system

is overburdened and beyond capacity, legal action may take years before being heard much less resolved, and undoubtedly at great personal expense.

A form of vaccine mandate seems to have already influenced Jamaicans' uptake of the vaccine in relation to opportunities for economic migration. Jamaican nurses looking for better-paying jobs overseas have taken the vaccine to take advantage of the employment opportunity, where they had not taken the vaccine before.<sup>21</sup> This might suggest that a mandate could have a noticeable impact if implemented in Jamaica. However, where mandates are framed by detractors as coercive, instituting them may mobilize even more pushback. Another consideration within the Jamaican context is the pre-existing

inequality of access to health services: where a vaccine mandate could lead to an increase in social inequalities such as accessing health and social services.

Considering any sort of mandate as a means to address low vaccine uptake requires an understanding of the root causes of vaccine hesitancy. The data gathered for this study shows that mistrust in government and in the vaccine are among the drivers of vaccine hesitancy in Jamaica. A government-imposed vaccine mandate thus stands to further undermine public trust and might even lead to a reduction in compliance with other public health measures such as mask-wearing.

20 Shah, Seervai and Schneider, "How Can the U.S. Catch Up?"

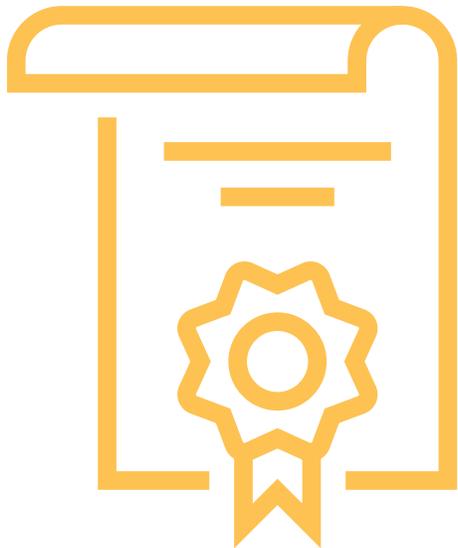
21 "Are Nurses Taking Vaccine to Work Overseas?" Television Jamaica, February 8, 2022, [www.televisionjamaica.com/primetimenews/video/27554-are-nurses-taking-vaccine-to-work-overseas](http://www.televisionjamaica.com/primetimenews/video/27554-are-nurses-taking-vaccine-to-work-overseas).





# 4

## Review of Existing Knowledge



Vaccination rates amongst those with at least a university degree are around

**50%  
HIGHER**

than those without a degree.

Low vaccine uptake is a result of complex and often interlinked contextual influences such as demographic and psychographic factors, structural impediments, and issues of complacency, convenience, and confidence.<sup>22</sup>

## Demographic Factors

There are correlations between people's attitudes to taking COVID-19 vaccines and various demographic attributes. Clarifying these correlations can aid in creating a profile of those mostly likely to be reluctant, and how they might be reached.

COVID-19 vaccine acceptance varies according to age. A UK study found that

vaccine hesitancy is more significant in younger age groups, 27 percent in 16 to 24 year olds versus 5 percent for those 75 and older.<sup>23</sup> The difference between vaccine hesitancy across age groups could be related to a person's risk perception. Adolescents and young adults may perceive their risk of contracting COVID-19 or having a serious illness from COVID-19 as low. This has implications for public health as perception of higher risk is often associated with higher adherence to COVID-19 containment measures and a higher probability of individuals' engaging in preventative measures such as obtaining the COVID-19 vaccine.<sup>24</sup> It is unclear whether age influences vaccine hesitancy beyond that which is intermediated by age-associated risk

perception.

Higher educational attainment is associated with fewer concerns over vaccines. There is evidence that vaccination rates amongst those with at least a university degree are around 50 percent higher than those without a degree.<sup>25</sup> In the United States, education level plays a significant role in determining people's willingness to get the vaccine: Americans with a higher education level were almost twice as likely to take the COVID-19 vaccine compared to those Americans with a lower education level.<sup>26</sup> It might be that those with less education have gaps in their knowledge about the efficacy and safety of vaccines.<sup>27</sup> It may also be the case that those with more education are intellectually predisposed

22 World Health Organization, "Report of the SAGE Working Group on Vaccine Hesitancy," October 1, 2014, [www.who.int/immunization/sage/meetings/2014/october/1\\_Report\\_WORKING\\_GROUP\\_vaccine\\_hesitancy\\_final.pdf](http://www.who.int/immunization/sage/meetings/2014/october/1_Report_WORKING_GROUP_vaccine_hesitancy_final.pdf).

23 Elaine Robertson et al., "Predictors of COVID-19 Vaccine Hesitancy in the UK Household Longitudinal Study," *Brain, Behaviour, and Immunity* 94 (May 2021): 41-50, doi: 10.1016/j.bbi.2021.03.008.

24 Xin Yu Yang et al., "Risk Perception of COVID-19 Infection and Adherence to Preventive Measures among Adolescents and Young Adults," *Children (Basel)* 7, no. 12 (December 2020): 311, doi:10.3390/children7120311.

25 Jenesse Miller, "Education is a Bigger Factor than Race in Desire for COVID-19 Vaccine," *USC News*, February 25, 2021, <https://news.usc.edu/182848/education-covid-19-vaccine-safety-risks-usc-study/>.

26 Kyla Thomas and Jill Darling, "Education Is Now a Bigger Factor Than Race in Desire For COVID-19 Vaccine," *USC Schaeffer*, 2022, <https://healthpolicy.usc.edu/evidence-base/education-is-now-a-bigger-factor-than-race-in-desire-for-covid-19-vaccine/>.

27 Amanda Hudson and William J. Montelpare, "Predictors of Vaccine Hesitancy: Implications for COVID-19 Public Health Messaging," *International Journal of Environmental Research and Public Health* 18, no. 8054 (2021): 1-14, <https://doi.org/10.3390/ijerph18158054>.

**Individuals lower on the socio-economic scale are more likely to believe that the vaccine is unsafe. This could be attributed to level of education, by way of little exposure to and difficulty in understanding scientific information.**



to gathering data by availing themselves of more information, which is more likely to be from authoritative sources, and so do not rely solely on peers or social media.

Across the world, COVID-19 vaccine acceptance rates appear to differ by gender, where men are more willing to accept the vaccine.<sup>28</sup> Gender hesitancy in women is as a result of women having a higher fear of invasive actions, such as injections, concern over its potential effects on their fertility, and fear of side effects on the foetus they are carrying.<sup>29</sup> Women also tend to rely more on the internet for health-related information, which suggests that they are more exposed to negative vaccine-related information being proliferated online.<sup>30</sup>

Socio-economic status influences willingness to take the COVID-19

vaccine.<sup>31</sup> Individuals lower on the socio-economic scale are more likely to believe that the vaccine is unsafe. This could be attributed to level of education, by way of little exposure to and difficulty in understanding scientific information, along with higher mistrust of scientific research in general. This general consideration would apply to what is called health literacy—the capacity to retrieve, understand, apply, and use medical information. Lower levels of health literacy can fuel the spread of misinformation which correlates with lower vaccination rates.<sup>32</sup>

While it is useful to identify correlations between people's attitudes and demographic characteristics, this does not suggest that those attitudes that do not fall within any of these profiles should be ignored. The identified demographic profiles provide information about who

interventions should target, and what the specifics of the interventions ought to be to obtain the most optimal results.

## Complacency

Complacency is related to a person's perception of their risk of contracting the virus, as well as their perception of the likelihood that, should they become infected, it will be detrimental to them and/or to their loved ones. Complacency is influenced by a cost-benefit calculus, omission bias, and media coverage. Factors that are categorized under complacency play a significant role in determining someone's predisposition towards making a particular decision and plays a significant role in understanding the underlying factors operating in the subconscious, or even the conscious, of those who are reluctant to take the

28 Margot Bellon, "Gender Differences in COVID-19 Vaccine Hesitancy," Stanford University, September 15, 2021, <https://gender.stanford.edu/news-publications/gender-news/gender-differences-covid-19-vaccine-hesitancy>.

29 Charles Egloff et al., "Pregnant Women's Perceptions of the COVID-19 Vaccine: A French Survey," *PLOS One* 17, no. 2 (February 2022): e0263512, <https://doi.org/10.1371/journal.pone.0263512>.

30 Kaadan et al., "Determinants of COVID-19 Vaccine Acceptance in the Arab World: A Cross-sectional Study," *Global Health Research Policy* 6, no. 23 (July 2021), <https://doi.org/10.1186/s41256-021-00202-6>.

31 Yoshihiko Kadoya et al., "Willing or Hesitant? A Socioeconomic Study on the Potential Acceptance of COVID-19 Vaccine in Japan," *International Journal of Environmental Research and Public Health* 18, no. 9, 4864 (2021), <https://doi.org/10.3390/ijerph18094864>.

32 Luigi R. Biasio et al., "Health Literacy, Emotionality, Scientific Evidence: Elements of an Effective Communication in Public Health," *Human Vaccines and Immunotherapeutics* 14, no. 6 (2018): 1515-1516, <https://doi.org/10.1080/21645515.2018.1434382>.

vaccine.

In the context of the COVID-19 pandemic, there are several cost-benefit calculus options that influence the vaccination decision. An individual's perception of the benefits of a medical treatment or drug influences their willingness to undergo the treatment or take the drug. Foremost are the perceived consequences: how an individual believes that performing a particular action or behaviour will benefit or harm them and others. A person may be willing to take the vaccine if they think it will protect them and others from contracting the virus, or getting side effects from the virus. Willingness to take the vaccine may stem from the belief that there are other benefits, such as freedom of worship and movement.<sup>33</sup> On the other hand, someone may resist taking the COVID-19 vaccine if they think the vaccine will harm them and/or others. This harm may take the form of adverse side effects.<sup>34</sup>

Related to the perception of consequences is the expected severity of those consequences. According to the health belief model, an action will not occur unless the individual believes that contracting the illness would result in sufficiently serious repercussions or consequences. In the context of COVID-19, this could mean if the person contracts the virus, they are fearful that its seriousness might impact their ability to work or function normally. An individual's gauge of the severity may



A  
ONE-POINT  
SHIFT UPWARDS  
on the “disinformation scale”  
is associated with a

2%

DROP IN THE  
MEAN VACCINATION  
COVERAGE

result in an increased willingness to take the vaccine.<sup>35</sup>

An individual's perceived vulnerability to infection and likely severity of infection also play a role in protective health behaviours such as vaccination. In a study conducted in China, perceptions of risk and severity of COVID-19 illness were important predictors of vaccination.<sup>36</sup> The study further showed that health care workers who believed that they might be infected in the future because of the nature of their job, were more willing to take vaccines. Risk perception played a more significant role in vaccine acceptance in healthcare workers compared to the general population.

To the extent that the cost-benefit element plays a role in vaccination hesitancy, it

has implications for the messaging to increase vaccination uptake. The public education and encouragement campaign should speak specifically to perceived benefits, costs, and risks; this may have an impact on people's willingness to be inoculated.

Omission bias is a preference for inaction over action, regardless of cost-benefit calculus. In this scenario, individuals believe the risk of inaction is less than the risk of action.<sup>37</sup> An individual who has an omission bias prefers not to do an action as they believe this is less detrimental than when the action is done. In the context of COVID-19 vaccines, a person with an omission bias will choose not to take the COVID-19 vaccine as they believe the side effects associated with the vaccine are greater than the effects associated with the actual illness.

The influence of media on people's behaviour has been extensively studied and the data shows that vaccine-critical websites influence vaccine intentions.<sup>38</sup> Social and traditional media can have both a positive and a negative effect on vaccine uptake. Anti-vaccination campaigns within social media and by alternative medical practitioners such as anti-vaccine naturopaths and homeopaths can adversely affect vaccine uptake.<sup>39</sup> A cross-country (global) analysis to determine the effect of social media on vaccine hesitancy showed that a one-point shift upwards on their “disinformation scale” is associated with

33 Abdul Kalam et al., “Exploring the Behavioural Determinants of COVID-19 Vaccine Acceptance among An Urban Population in Bangladesh: Implications for Behaviour Change Interventions,” *PLOS One* 16, no. 8 (August 2021): e0256496, <https://doi.org/10.1371/journal.pone.0256496>.

34 “The Health Belief Model and Personal Health Behaviour,” *Health Education Monographs* 2, no. 4 (Winter 1974): 409-419.

35 Marshall H. Becker, “The Health Belief Model and Sick Role Behaviour,” *Health Education Monographs* 2, no. 4 (1974): 409-419, [www.jstor.org/stable/45240625](http://www.jstor.org/stable/45240625).

36 M. Ihsan Kaadan et al., “Determinants of COVID-19 Vaccine Acceptance in the Arab World: A Cross-sectional Study,” *Global Health Research and Policy* 6, no. 23 (July 2021): 1-7, <https://doi.org/10.1186/s41256-021-00202-6>.

37 Hossein Azarpanah et al., “Vaccine Hesitancy: Evidence from an Adverse Event Following Immunization Database, and the Role of Cognitive Biases,” *BMC Public Health* 21, no. 1686 (September 2021), <https://doi.org/10.1186/s12889-021-11745-1>.

38 Cornelia Betsch et al., “The Influence of Vaccine-critical Websites on Perceiving Vaccination Risks,” *Journal of Health and Psychology* 15, no. 3 (April 2010): 446-455, doi: 10.1177/1359105309353647.

39 Anoop Nair et al., “Social Media, Vaccine Hesitancy and Trust Deficit in Immunization Programs: A Qualitative Enquiry in Malappuram District of Kerala, India,” *Health Research Policy and Systems* 19, no. 56 (August 2021): 1-8, <https://doi.org/10.1186/s12961-021-00698-x>.

a 2 percent drop in the mean vaccination coverage.<sup>40</sup> This means that the spreading of anti-vaccine information through media channels can adversely affect vaccine uptake.

## Convenience

Convenience is related to considerations such as physical availability of vaccines, affordability, and the length of travelling and waiting time to get a shot. Structural barriers may also affect convenience; these are systemic issues that impact a person's ability to access a service, such as time, transportation, cost, and location (of site offering the service).<sup>41</sup> Some persons, while reluctant, may be more likely to take the vaccine if the effort and cost to get the vaccine are low. There is evidence that convenient and accessible vaccination sites increases vaccine uptake. A 2021 survey in the United States showed that 56 percent of unvaccinated Americans would be more willing to get vaccinated if the vaccines were offered during a routine visit with their physician. This suggests that convenience is a meaningful determinant whether an individual is vaccinated or not.<sup>42</sup>

## Confidence

Confidence is related to distrust of some aspect of the vaccine delivery chain. The distrust may be with authorities or with the science at the origin of the process.

**Anti-vaccination campaigns within social media and by alternative medical practitioners such as anti-vaccine naturopaths and homeopaths can adversely affect vaccine uptake.**

Especially regarding the COVID-19 vaccine, there may be a concern with what appeared to have been its rapid development.<sup>43</sup>

Across the world, lack of trust in governing institutions and scientific authorities is strongly correlated with vaccine hesitancy. Citizens may distrust their own government, either in general or with respect to the current administration. Vaccine-hesitant individuals may believe that governments are not disclosing information related to the side effects of the vaccines. In Sydney, Australia, higher trust in government was associated with a 50 percent increase in vaccine acceptance compared to jurisdictions that did not trust their government.<sup>44</sup>

Mistrust in science, or in scientific authorities, may sometimes get a boost from instances in which the institution is incontrovertibly found to be wrong.

One example would be the World Health Organization's (WHO) advice early in the pandemic that masks were unnecessary,<sup>45</sup> when the ensuing scientific evidence showed otherwise. Pharmaceutical companies' credibility also is subject to mistrust, based on the supposition that they are profit driven, and will use unscrupulous ways to increase their profits. It would not be unreasonable to assume that the shift from the message "vaccines will protect you from catching COVID-19" to "vaccines will protect you from severe illness if you catch COVID-19" did not go unnoticed, and this may have contributed further to undermining trust in government officials' statements about the vaccine. The large numbers of vaccinated people who contracted COVID-19 in the fourth Omicron wave also may have played a role in seeding or sustaining doubts about the vaccine's efficacy.<sup>46</sup>

40 Steven L. Wilson and Charles Wiysonge, "Social Media and Vaccine Hesitancy," *BMJ Global Health* 2020 5, no. 10 (October 2020): e00420, doi:10.1136/bmjgh-2020-004206.

41 Yanjie Zhang and Rebecca Fisk, "Barriers to Vaccination for Coronavirus Disease 2019 (COVID-19) Control: Experience from the United States," *Global Health Journal* 5, no. 1 (February 2021): 51-55, doi: 10.1016/j.glojh.2021.02.005.

42 Asif Dhar et al., "Can More US Consumers Be Swayed to Take the COVID-19 Vaccine? Overcoming Access, Trust, Hesitancy, and Other Barriers: Findings from the 2021 Consumer Vaccine Survey," Deloitte Insights, November 10, 2021, [www2.deloitte.com/us/en/insights/industry/health-care/vaccine-access-trust-barriers-to-vaccination.html](http://www2.deloitte.com/us/en/insights/industry/health-care/vaccine-access-trust-barriers-to-vaccination.html).

43 Musa al Gharbi, "Why Don't Some People Want to Get the Vaccine? Here's Why," *Guardian (UK)*, February 15, 2022, [www.theguardian.com/commentisfree/2022/feb/15/this-is-why-some-people-dont-want-to-get-the-covid-vaccine](http://www.theguardian.com/commentisfree/2022/feb/15/this-is-why-some-people-dont-want-to-get-the-covid-vaccine).

44 Mallory Trent et al., "Trust In Government, Intention to Vaccinate and COVID-19 Vaccine Hesitancy: A Comparative Survey of Five Large Cities in the United States, United Kingdom, and Australia," *Vaccine* (June 2021), <https://doi.org/10.1016/j.vaccine.2021.06.048>.

45 Zixuan Wang et al., "In Communities We Trust: Institutional Failures and Sustained Solutions for Vaccine Hesitancy," Gerald R. Ford School of Public Policy, University of Michigan, 2021, <https://stpstage.fordschool.umich.edu/sites/stpp/files/2021-07/vaccine-hesitancy-STPP-TAP-2021-v5.pdf>.

46 "Why Don't Some People Want to get the Vaccine?"

## Psychographic Factors

Demographic characteristics identify only the persons who are most likely to be vaccine hesitant, but not why. Discomfort with taking vaccines in general, as well as with the COVID-19 vaccine in particular, can arise from several underlying psychographic characteristics. Psychographic factors pertain to an individual's attitudes, beliefs, opinions, and values and can play a role in influencing behaviour. Understanding the psychological bases of hesitancy includes identifying what underlying factors might be operating in the subconscious, or even the conscious mind, of those who are shying away.

An individual's sense of personal agency can influence whether they take the vaccine or not. Personal agency refers to an individual's belief that they are responsible for influencing their own actions. A person with a keen sense of agency will intentionally plan their actions, predict outcomes of actions, and regulate their own behaviour to reach goals.<sup>47</sup> It is comprised of four properties: intentionality, forethought, self-reactiveness, and self-reflectiveness. If a person views taking the COVID-19 vaccine as beneficial as it allows them to control their own life circumstances such as how they conduct their daily affairs, then they may take it. Whereas those individuals who have low personal agency, such as those who are reliant on a supernatural being, may be vaccine

hesitant if they believe the divine entity would disapprove of the procedure. This phenomenon is known as perceived divine will and has been shown to have implications on whether individuals obtain the COVID-19 vaccine.<sup>48</sup>

Perceived self-efficacy refers to an individual's sense of control over circumstances through their behaviour. While agency provides the capacity for action, self-efficacy is about the impact of that action on one's circumstances. If someone takes a fatalistic approach to life, they lack self-efficacy. In the context of the pandemic, such a person may not believe they can prevent contracting the infection. Self-efficacy is the confidence an individual has in their ability to coordinate and execute actions that lead to a specific outcome. This lack of belief in being efficacious could include even the simple outcome of being protected by getting vaccinated.<sup>49</sup> In studies conducted on human papillomavirus (HPV) vaccine uptake, young women with higher perceived self-efficacy were more likely to take the HPV vaccine. The greater one's perceived self-efficacy the less likely other factors such as perceived barriers will prevent an individual from taking the HPV vaccine.<sup>50</sup>

The most common types of fears that could affect vaccine uptake are of needles, adverse events, and the unknown.<sup>51</sup> For example, a UK survey to determine how injection fears correlate with COVID-19 vaccine hesitancy found that those who

are afraid of needles, and/or of blood, or are fearful of obtaining a physical injury from an injection were 22 percent more likely to be COVID-19 vaccine-hesitant than those who screened negatively (around a tenth).<sup>52</sup> In another study, in the United States, 44 percent of participants identified fear of adverse side effects as reason for their vaccine hesitancy.

Disgust sensitivity refers to the propensity to feel disgust towards pathogens such as the COVID-19 pathogen, SARS-CoV-2. Disgust sensitivity is a behavioural immune system response, a psychological mechanism that allows individuals to detect potentially infectious agents and engage in preventative behaviours to protect themselves. There is a positive and direct relationship between pathogen disgust sensitivity and vaccine uptake. The more an individual experiences an aversive emotion towards a pathogen, the greater the likelihood that it will trigger a behavioural impulse that could lead to protective actions such as vaccination.<sup>53</sup> Vaccine hesitancy would therefore be associated with low disgust sensitivity.

Amidst the theoretical and speculative proposals about what causes low vaccine uptake, the particularities of a country will determine which factors are most prevalent – whether it be convenience, confidence, or complacency. These are, in turn, extrapolated from the country's culture, political system, income level, educational level, and other societal attributes.

47 Sinan Alper, "Encyclopedia of Personality and Individual Differences," 2020, <https://doi.org/10.1007/978-3-319-24612-3>.

48 M. A. Kalam, et al., "Exploring the Behavioral Determinants of Covid-19 Vaccine Acceptance among an Urban Population in Bangladesh: Implications for Behavior Change Interventions," *PLOS One* 16, no. 8 (2021): e0256496, <https://doi.org/10.1371/journal.pone.0256496>.

49 Janet Buckworth, "Promoting Self-Efficacy for Healthy Behaviors," *ACSM Health and Fitness Journal* 21, no. 5 (2017): 40-42, doi: 10.1249/FIT.0000000000000318.

50 Hao Chen et al., "Health Belief Model Perspective on the Control of COVID-19 Vaccine Hesitancy and the Promotion of Vaccination in China: Web-Based Cross-sectional Study," *Journal of Medicinal Internet Research* 23, no.9 (2021): e29329, [www.jmir.org/2021/9/e29329](http://www.jmir.org/2021/9/e29329).

51 Ryoko Sato and Benjamin Fintan, "Fear, Knowledge, and Vaccination Behaviours Among Women in Northern Nigeria," *Human Vaccines & Immunotherapeutics* 16, no. 10 (2020): 2438-2448, doi: 10.1080/21645515.2020.1723365.

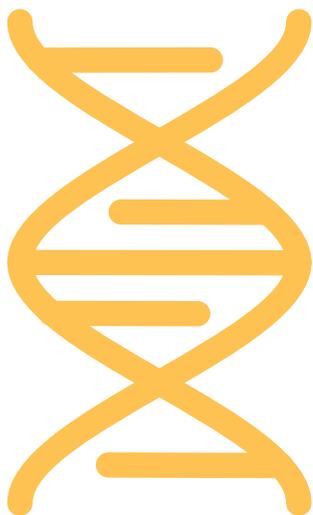
52 Daniel Freeman, "Injection Fears and COVID-19 Vaccine Hesitancy," *Psychological Medicine*, June 16, 2021, doi:10.1017/S0033291721002609.

53 Mark Schaller, "The Behavioural Immune System and the Psychology of Human Sociality," *Phil. Trans. R. Soc. B* (December 2011) 366, 3418–3426, doi:10.1098/rstb.2011.0029.



# 5

## Survey Findings



**60%**

OF MEN  
did not take the vaccine

**57%**

OF WOMEN  
did not take it

A nationwide survey was conducted in Jamaica with a view to disaggregating the factors that best explain Jamaica's low vaccine take up. While it was not possible to test for all the possible causes of vaccine hesitancy, as outlined in the previous section, those that were tested for revealed a clear profile of the typical vaccine-hesitant Jamaican.

## Demographics

In terms of the demographic profile of the vaccine hesitant in Jamaica, age was found to play a role but gender did not. The survey found that those in the 18-24 age cohort recorded the highest percentage of individuals who had not taken the vaccine (68 percent) compared to those above 64 years old (42 percent). That is, those in the age range 18-24 years old are twice as likely to be unvaccinated compared to those above 64 years old (Figure 1). However, gender is not an important determinant of vaccine hesitancy in Jamaica. Sixty percent of men did not take the vaccine, while 57 percent of women did not take it, a statistically insignificant difference.

Education and income were both critical determinants of an individual's willingness to take the COVID-19 vaccine. Forty-six percent of those who had completed a bachelor's degree were vaccinated, whereas only 33 percent of those who did not finish high school were inoculated, and only 23 percent who did not finish primary school had received the vaccine. Similarly, the higher one's income bracket, the more likely that person is to take the vaccine. Half of the higher income bracket had taken the vaccine, compared to 40 percent of those in the middle-income bracket, and 35 percent in the lower income bracket (Figure 2).

Given the extensive media coverage of some Christian churches' outspoken opposition to the vaccine, the role of religion as a determinant of willingness to take the COVID-19 vaccine was not what might have been expected. Forty-seven percent of those who identified as religious had taken the vaccine, 12 percentage points more than the (self-identified) non-religious respondents who had not taken the jab.

## Complacency, Convenience, Confidence

Complacency is a determinant in Jamaicans' willingness to take the COVID-19 vaccine, but not a huge one. A complacent individual believes their risk of contracting COVID-19 is low, and if they contract the virus, they are less likely to have a severe illness. The data revealed that more complacent individuals were less likely to take the COVID-19 vaccine (66 percent) than those not complacent (58 percent). Related, but more significantly, a person's risk appetite is a significant deciding factor in whether an individual will take the COVID-19 vaccine. We calculated risk aversion based on worry about the side effects of the vaccine, knowing someone who got sick from the vaccine, and mistrust of science. The survey revealed that those classified as risk-averse are more likely to avoid the vaccine (82 percent of them) than those who are not risk-averse (34 percent).

Convenience was cited as an

**The role of religion as a determinant of willingness to take the COVID-19 vaccine was not what might have been expected. Forty-seven percent of those who identified as religious had taken the vaccine, 12 percentage points more than the (self-identified) non-religious respondents who had not taken the jab.**

overwhelming actor in vaccine take up, where 95 percent of respondents described some aspect of the vaccination process delivery as inconvenient. A doctor's office is the preferred location to receive the vaccine, as a third of respondents indicated this. Twenty-eight percent stated their preference to receive the vaccine at a health centre. Community centres and schools are the least favoured sites to get vaccinated (9 and 6 percent, respectively).

Confidence is associated with trust in the vaccine, in government, and in scientific knowledge. In Jamaica, confidence in the vaccine is low. Jamaica, generally speaking, is a low-trust society. This lack of trust is evident with regard to the COVID-19 vaccine, as nearly 80 percent of those who did not take it indicated that they lacked trust in their government, compared to 36 percent of people who do trust the government. There is even higher distrust in the vaccine itself: 87 percent of the unvaccinated do not trust the vaccine, compared to 35 percent of the vaccinated. Fifty-six percent of the respondents cited the newness of the vaccine, its potential harm, or not knowing enough about the vaccine as reasons for not getting vaccinated. Correspondingly, 78 percent said that more information on how the vaccine works, its effectiveness, and its safety would most likely persuade them to take it. Outside of family members, the most trusted source of the information are doctors and other healthcare workers.

Thus, the predominant profile of the vaccine hesitant Jamaican is a young, low income person (more likely male than female but not significantly so), who did not finish primary school, is not religious, is not complacent but is risk averse, and



# 95%

of respondents described  
some aspect of the  
**VACCINATION DELIVERY  
PROCESS AS**

**INCONVENIENT**

who does not trust the government or the vaccine. That person is most likely to be convinced by a family member, doctor, or other healthcare worker, and they prefer to go to a doctor's office or a health centre to get jabbed.

## Analysis

While the data provides a profile of the typical vaccine hesitant Jamaican, this alone is not useful in informing efforts to increase vaccine uptake. For that we have to look at some of the more discrete aspects of the findings to extrapolate that which would be useful with regard to the factors that drive vaccine hesitancy, so that uptake initiatives can target those factors with regard to what aspect of hesitancy is being targeted, how it is targeted, and who is the messenger.

There are several points to be considered in contemplating what the survey data implies for any endeavour to increase vaccine uptake. There are also factors that overlap with each other. While younger people are twice as likely to be

unvaccinated than older people, this may not be due to any intrinsic difference in age category, but to their sources of information. Younger people are more likely to get their information from social media, where conspiracy theories, anti-vaccination campaigns, and speculative discussions about COVID-19 and the vaccine thrive. A 2021 UNICEF-Gallup poll found that 45 percent of young persons between 15 to 25 years old most often use social media to stay informed, compared to only 17 percent of those over age 40.<sup>54</sup>

Low income and low educational achievement correspond to low vaccine rates in Jamaica, a correlation substantiated in other jurisdictions, where the lower an individual's status, the lower they perceive the risk to be of contracting COVID-19.<sup>55</sup> Educational attainment is a key determinant of COVID-19 vaccination status. Those with less education are less willing to take the vaccine, likely because they may not have access to high-quality information related to the vaccine, and may be less able to understand the information they do have access to,<sup>56</sup> or be subject to misinformation, which is often more digestible. Jamaicans who have less education are twice as likely to have not taken the COVID-19 vaccine compared to those that have at least completed a university degree. That is a meaningful difference and points to the potential benefit of targeting that demographic using the media and content that will appeal to them.

Complacency is also strongly correlated with socioeconomic status, where higher complacency is correlated with lower socioeconomic status, and both

54 Gallup Blog, "Young People Rely on Social Media, but Don't Trust It," <https://news.gallup.com/opinion/gallup/357446/young-people-rely-social-media-don-trust.aspx>.

55 Noni MacDonald, "Vaccine hesitancy: Definition, scope and determinants," *Vaccine* 33(34): 4161-4, August 14, 2015, <https://pubmed.ncbi.nlm.nih.gov/25896383/>.

56 Suzanna Awang Bono et al., "Factors Affecting COVID-19 Vaccine Acceptance: An International Survey among Low- and Middle-Income Countries," 2021, <https://doi.org/10.3390/vaccines9050515>.

are correlated with lower likelihood of taking the vaccine.<sup>57</sup> Complacency fed by misinformation also emerges as a key area to be focused on in efforts to increase vaccination rates. While the study did not drill down into the granular details of COVID-19 and vaccine-related misinformation in Jamaica, and given that a large proportion of respondents indicated an interest in more information about the vaccine, the appropriate response would be to increase the output of accessible, valid, and incontrovertible information to the general public, and to the specific target groups identified here as more vaccine resistant.

Where confidence is associated with trust in the vaccine, in the government, and in scientific knowledge, Jamaicans show low confidence, and thus low trust, which are significant drivers of low vaccine rates. Among the top reasons cited for not taking the vaccine are lack of trust in the government and in the efficacy of the vaccine itself. This finding would be relevant to an initiative to increase vaccinations, particularly where a large proportion of the unvaccinated say they would be persuaded to take the vaccine if they had more information about its safety. Information interventions can influence risk perceptions, correct myths, and raise awareness about vaccines, leading to more positive attitudes about vaccination.<sup>58</sup>

Trust, or the lack of it, is a major issue. The deep-seated distrust of government is not specific to vaccines but is a significant driver of low uptake. This historical distrust of government and other traditional institutions of authority



cannot be undone in a timeframe that would have any bearing on the trajectory of the pandemic. However, it should be considered with regard to who is disseminating the pro-vaccination message. Public officials should not be the face of a COVID-19 vaccination drive.<sup>59</sup> Respondents said they trust family members or health professionals most with regard to who could persuade them to get vaccinated; thus, it is these groups that should be the messengers of the pro-vaccination message.

Ninety-five percent of the unvaccinated reported that the process of getting vaccinated was inconvenient. This does not necessarily mean that that inconvenience was the binding obstacle to vaccination (only 4 percent stated that a more convenient location would

make it more likely for them to take the vaccine) but the high proportion is nevertheless noteworthy. Many of those could very well be unvaccinated primarily because of the other factors discussed in this report – distrust, fear, complacency, etc. Nonetheless, the discovery that so many of the unvaccinated deem it to be inconvenient suggests that the government’s efforts to make vaccinations more convenient are still lacking. Perhaps the early reports about the vaccination process entailing long wait times at overcrowded sites, and delays resulting from inefficient registration processes are still in people’s minds.<sup>60</sup> If even a tenth of the unvaccinated overcome their reluctance because getting vaccinated becomes convenient, the country’s vaccination rate would rise by eight percentage points.

57 “Education and Socioeconomic Status Factsheet,” American Psychological Association, 2017, [www.apa.org/pi/ses/resources/publications/education](http://www.apa.org/pi/ses/resources/publications/education).

58 Corneila Betsch et al, “Using Behavioral Insights to Increase Vaccination Policy Effectiveness,” *Policy Insights from the Behavioral and Brain Sciences* 2, no. 1 (2015): 61-73, <https://journals.sagepub.com/doi/10.1177/2372732215600716>.

59 Nuffield Council on Bioethics, “Vaccine Access and Uptake,” Bioethics Briefing Note, April 20, 2021, [www.nuffieldbioethics.org/publications/vaccine-access-and-uptake](http://www.nuffieldbioethics.org/publications/vaccine-access-and-uptake).

60 “Chung Offers Solution to Reduce Wait Time at Vaccination Sites,” *Observer*, September 23, 2021, [www.jamaicaobserver.com/latestnews/Chung\\_offers\\_solution\\_to\\_reduce\\_wait\\_time\\_at\\_vaccination\\_sites](http://www.jamaicaobserver.com/latestnews/Chung_offers_solution_to_reduce_wait_time_at_vaccination_sites).



# 6

## Conclusion and Recommendations



**A HIGH RATE OF DISTRUST  
of the government and  
LOW CONFIDENCE  
in the vaccine**

**undermine the goal  
set by the government for  
VACCINE COVERAGE  
in the population**

Vaccination against COVID-19, or any communicable disease, is a public health good. The evidence is solid that vaccinations reduce the mortality and morbidity of the COVID-19 virus, which is of benefit not only to those who contract the illness, but to those who would be otherwise displaced from a hospital bed, or whose treatment would be relegated as less important; to the public health system which bears the cost of treating people ill with the disease; and to the national economy which suffers the productivity loss represented by the person's inability to work, and whose recovery is hampered by the continuation of the pandemic and the measures necessary to control it.

Trust, information, and convenience: how these play out among the Jamaican vaccine-hesitant are, according to the data, the three areas that should be considered in efforts to increase vaccine uptake. A high rate of distrust of the government and low confidence in the vaccine undermine the goal set by the government for vaccine coverage in the population. Misinformation abounds,



## CONVENIENCE for Jamaicans, is receiving the vaccine in a

### DOCTOR'S OFFICE OR HEALTH CENTRE

and appears to drive complacency and increase risk aversion, at the same time as people's greatest doubts about the vaccine have to do with its safety, its ingredients, and the side effects. Combatting that misinformation with accessible information that addresses people's concerns about the vaccine should have a positive effect on vaccine uptake. That information should not have the government's or public officials' faces on it, with the exception perhaps of doctors in the public health system, such as the Chief Medical Officer, who appears to be widely respected and trusted. Finally, and

in the most practical of terms, the more convenient it is to take the vaccine, the more people will take it. Convenience, for Jamaicans, is receiving the vaccine in a doctor's office or health centre.

Though the study did not directly consider the question of vaccine mandates, the data that was gathered suggests that they may harm the cause. Given the trust deficit in the government, and the lack of confidence in the vaccine, a vaccine mandate is likely to not only be resisted, but may harden resistance to taking the vaccine, and create openings for fraudulent vaccine certificates, which will then undermine the trustworthiness of all vaccine certification. The World Health Organization (WHO) recommends that mandatory vaccinations in countries should only be used when governments have exhausted all other options to improve vaccination uptake.<sup>61</sup> The data from this study points to what some of these other options might entail.

<sup>61</sup> "WHO: Mandatory Vaccinations Are a Last Resort" UNRIC, December 7, 2021, <https://unric.org/en/who-mandatory-vaccinations-are-a-last-resort/>.

**The evidence is solid that vaccinations reduce the mortality and morbidity of the COVID-19 virus. The government has a legitimate and even obligatory role to procure vaccinations, and promote their uptake, in its provision of public health goods to the population.**

## Recommendations

The recommendations here follow directly from the survey's findings.

- 1. Create messaging and information packages that are accessible (easy to understand) that specifically speak to the safety of the vaccines, the ingredients of the vaccine, how the vaccine works, and how it was developed so quickly.**

The Ministry of Health and Wellness (MOHW), with media and marketing partners, should develop content to counteract existing and widespread misinformation and disinformation about COVID-19 and the vaccine. It should consider the use of culturally relevant language, as some vaccination campaigns already have done, as a means of ensuring that information is well received and understood by those who need it most. The method of delivery should also be informed by the characteristics of the target audience.

- 2. Emphasise the role of doctors and health care professionals in delivering messages aimed at increasing vaccine take up, as well as encourage vaccinated persons to talk to and persuade their**

**unvaccinated family members to take the vaccine, perhaps through a campaign specific to this objective.**

Given the lack of trust in the government, public officials should not be the face of campaigns to increase vaccination, nor the carriers of pro-vaccination messages. Instead, doctors and nurses should be the primary messengers of information related to COVID-19 vaccines, and of encouragement to people to take the vaccine. The majority of respondents cited family members as the person most likely to be able to convince them to take the vaccine. The literature suggests that “influencers” on social media, admired entertainers, and the like might also be enrolled in such endeavours. Other trusted persons, such as church leaders, might also make effective messengers, particularly given the finding that those who identify as religious are more likely to be vaccinated than those who do not consider themselves religious.

- 3. Make getting vaccinated more convenient, and make it be seen to be more convenient.**

Doctors' offices and health centres are people's preferred locations to receive

the vaccine. While there have been initiatives to increase distribution of the vaccine via private doctors, this should be continued and expanded. These efforts should be well publicized, and the ease of getting vaccinated broadcast widely.

- 4. Develop a compensation scheme for vaccine-related health complications.**

The Jamaican government, as has obtained with governments all over the world, has indemnified vaccine manufacturers against vaccine injury claims. Anyone who wishes to seek legal remedy for adverse events associated with vaccination would have to bring a claim against the government in court to receive compensation.<sup>62</sup> There are usually significant delays in seeking redress through the courts, therefore the government should develop a compensation scheme for vaccine-related complications as this will provide reassurance to those who are concerned about side effects and are risk averse.<sup>63</sup> This fiscal risk need not, and should not, be carried out by the government since it has the option of buying the insurance from a third party.

<sup>62</sup> Alpha Sumner, “Jab Justice,” *Observer*, October 27, 2021, [www.jamaicaobserver.com/news/Jab\\_justice](http://www.jamaicaobserver.com/news/Jab_justice).

<sup>63</sup> OECD, “Enhancing Public Trust in COVID-19 Vaccines: The Role of Governments,” May 10, 2021, [https://read.oecd-ilibrary.org/view/?ref=1094\\_1094290-a0n03doefx&title=Enhancing-public-trust-in-COVID-19-vaccination-The-role-of-governments](https://read.oecd-ilibrary.org/view/?ref=1094_1094290-a0n03doefx&title=Enhancing-public-trust-in-COVID-19-vaccination-The-role-of-governments).

# Appendix 1: The Survey

Data from a survey instrument was used to examine trends in vaccine hesitancy in Jamaica, and 1170 persons completed this survey instrument. Questions were used to identify the underlying factors that contribute to the low vaccine uptake in Jamaica and to understand the profile of the vaccine-hesitant individual. The questions asked in the instrument were categorized as follows:

- Demographic Information
- Socioeconomic status
- Vaccine actions and reactions
- Psychographic perspective

## Standard of Living

The standard of living of individuals was ascertained by taking a weighted average of educational attainment, income level and subjective assessment of material

possessions such as motor vehicle, laptop, access to internet and the types of appliances present in an individual's home.

The weighted average was used to categorize persons as either low, middle, or high income.

## Complacency

The complacency variable was derived based on a weighted score of an individual's perception of their risk of obtaining severe illness if they contracted COVID-19, how important they perceive obtaining the COVID-19 is and whether they believe they are at risk of contracting COVID-19

## Convenience

The convenience variable was derived

based on a weighted score of whether individuals knew where vaccinations occurred and if the location was accessible.

## Confidence (Trust Index)

The trust index includes both trust in the vaccine and in the Government. The trust in vaccine variable includes an individual's perception of vaccine safety as well as, effectiveness in preventing or reducing severity of COVID-19 disease. Additionally, the trust in Government variable is based on an individual's perception of whether the Government acts in the best interest of the people including the less fortunate. A weighted average was taken of both variables to ascertain how confidence affects vaccination attitudes and perceptions.



# Notes



# Notes



# Long Shot

## Aiming to Reduce Vaccine Hesitancy

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