# **Full title**: Messages that increase COVID-19 vaccine acceptance: Evidence from online experiments in six Latin American countries

# Short title: Messages that increase COVID-19 vaccine acceptance

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### Abstract

As safe and effective vaccines become widely available, attaining herd immunity and limiting the spread of COVID-19 will depend on individuals choosing to vaccinate—and doing so quickly enough to outpace mutations. Using online surveys conducted across six Latin American countries in January 2021, we experimentally assess messages designed to counteract informational deficiencies and collective action problems that may drive hesitancy. We first find that basic vaccine information persuades around 8% of hesitant individuals to become willing to vaccinate, reduces intended wait to vaccinate by 0.4 months, and increases willingness to encourage others to vaccinate. Rather than facilitating free riding, learning, or social conformity, additional information about others' behavior increases vaccine acceptance when respondents expect herd immunity will be achieved. Finally, priming the social approval benefits of vaccinating also increases vaccine acceptance. These results suggest that providing information and shaping social expectations and incentives could both significantly increase vaccine uptake.

### Introduction

The COVID-19 pandemic has inflicted significant suffering across the globe, but the rapid development and production of safe and effective vaccines provides the basis for emergent mass vaccination campaigns to contain the pandemic. Though vaccines have become widely available in the Global North, the success of mass vaccination campaigns will depend on sufficiently large numbers of people in every part of the world choosing to get vaccinated to prevent the spread of the virus and facilitate the return of normal life. Since it is also essential for vaccination to outpace virus mutations, it matters both *if and when* populations are willing to vaccinate.

However, quickly reaching the 60%-90% uptake rates that experts believe are required to achieve herd immunity within a given community will be challenging (1, 2). Polls conducted between mid 2020 and early 2021 generally suggest that fewer than 75% of individuals are willing to get vaccinated in many countries (3–8). However, in some countries like the United States, where vaccines are now available to all adults, vaccination uptake subsided once about half the adult population was vaccinated. It is likely that the initial increase in enthusiasm resulting from the rollout of vaccination campaigns (4) reflected the uptake in vaccination by the most willing "always-takers." Fewer studies ask how quickly individuals would vaccinate once a vaccine is available to them. Those that do examine such timing find that around half the population intends to wait more than 3 months (4). If vaccine uptake is insufficient to attain herd immunity, or is too slow to prevent vaccine-resistant mutations, the pandemic is likely to last significantly longer.

These challenges are both pertinent and of immediate importance in Latin America, where the mortality and socioeconomic impacts of COVID-19 have been substantial and vaccination campaigns that began only recently are expected to continue into 2022. In line with high levels of skepticism of science (9), prior studies suggest that vaccine willingness generally lies between 50% and 60% in Argentina, Chile, and Perú and 70% and 80% in Brazil and México. In comparison with the Global North, relatively little is yet known about whether and how Latin Americans can be encouraged to take vaccines against COVID-19. These questions may be especially significant in the Global South, where more limited distribution channels than in the Global North may increase the costs of accessing vaccines, but encouraging vaccination is no less important for both mitigating human suffering and restricting the emergence and spread of new variants of the virus.

To understand how mass vaccination campaigns can overcome individuals' hesitancy, we leverage socialscientific theoretical frameworks that highlight how information and collective action problems can inhibit individually and socially optimal behaviors. The information transmission problem, whereby individuals lack exposure to credible information about the private costs and benefits of vaccination, may decrease vaccine willingness among risk-averse and uninformed individuals. Indeed, emerging COVID-19 research predominantly in the Global North has suggested that vaccine willingness is responsive to both expert information (10) and misinformation (6), although corrective messaging regarding vaccines for other diseases has produced less sanguine effects (11-13). It is thus important to establish whether and what type of information about COVID-19 vaccines can increase vaccine acceptance.

Beyond an individual's isolated health calculations, theories of collective action emphasize that information about the (expected) behavior of others could influence individual willingness to vaccinate—especially among hesitant individuals that perceive limited private benefits of vaccinating—in various ways (14). Among vaccine hesitant individuals, learning that many others will vaccinate could reduce their vaccine willingness by causing them to "free ride" on the safety provided by others being vaccinated (15–17). In contrast, learning that many others will vaccinate could instead increase vaccine acceptance to the extent that individuals draw inferences about the costs and benefits of vaccinations from the aggregated decisions of

others (18, 19) or update their perceptions of what is required to conform with community norms (8, 10, 20). However, any motivation to coordinate behaviors may also depend on participating in a *successful* collective effort (21-24), such that vaccination becomes more desirable when an individual expects to participate in a campaign that successfully achieves herd immunity. Since information about others' behaviors could both increase or decrease vaccine acceptance, understanding the potential social drivers of vaccination also has important implications for public messaging.

Another encouragement highlighted by collective action research is "selective incentives" private benefits that accrue indirectly only by taking the pro-social action (17). Prior studies in economic, public health, and political domains suggest that getting vaccinated could generate selective incentives through social approval within an individual's community network (25– 30), an altruistic "warm glow" from helping others in the community (31, 32), or improving individual or communal income or employment prospects (33, 34). Priming these motivations could encourage vaccination by creating reasons to vaccinate beyond the direct health benefits accruing to individuals and those immediately around them.

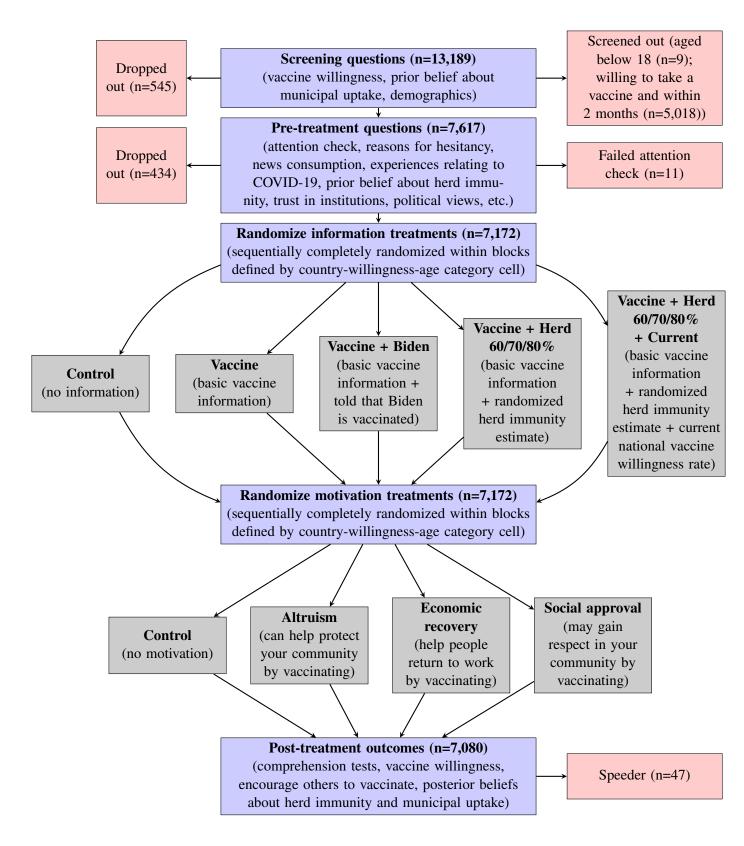
To evaluate which types of messages can overcome COVID-19 vaccine hesitancy, we embed a randomized experiment in a large online survey fielded in six Latin American countries before vaccines had become generally available to citizens. At the time of the survey in January 2021, uncertainty about vaccines and public health misinformation were prevalent—and remain so today. The treatments seek to establish the degree to which vaccine acceptance—in terms of both willingness to ever get vaccinated and how long an individual would wait to get vaccinated can be increased by; (i) addressing the information transmission problem, by providing basic information about the safety and efficacy of COVID-19 vaccines; (ii) updating beliefs about the behavior of others, by further informing respondents of expert opinion regarding the share of the population that will need to vaccinate to achieve herd immunity and the share of the population that is currently willing to do so; and (iii) priming selective incentives relating to social approval, altruism, and economic recovery. We focus on the subpopulation that is hesitant about taking a COVID-19 vaccine—those who are either unwilling or uncertain about getting vaccinated quickly. Beyond illuminating the informational and social bases for vaccine hesitancy, our experimental analyses seek to assess how vaccine attitudes can be shaped by public messaging, which could inform the mass campaigns designed to increase vaccine willingness across Latin America and elsewhere in the Global South.

### **Materials and methods**

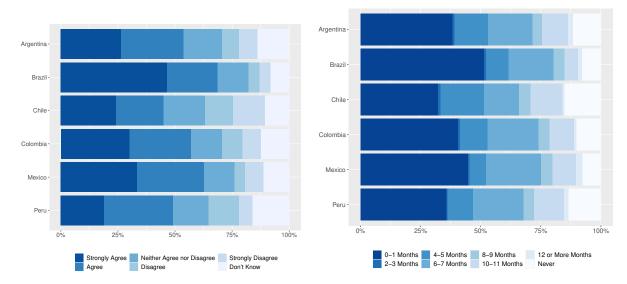
For our single-wave between-subjects study, we recruited around 2,000 adults from large online panels maintained by Netquest in each of Argentina, Brazil, Chile, Colombia, México, and Perú. These six countries rank among the most populous and worst hit by the pandemic in Latin America (*35, 36*). Given that Netquest's opt-in panels include at least 125,000 individuals in each country, we obtained samples within each country that are broadly nationally representative by age, gender, socioeconomic level, and region, according to recent national censuses; we also reweigh our data to ensure representativeness along these dimensions. The online surveys were conducted between January 11 and January 29, 2021. Fig 1 depicts the flow of the survey, which took the median respondent 26 minutes to complete in the Qualtrics survey platform. S1 Appendix describes the sample of individual respondents in detail.

# Descriptive data on vaccine willingness in Latin America and screening

We first elicited respondents' willingness to accept a vaccine once available to them and how soon they would take it (top-coded at 12 months). The results in Fig 2 suggest that, absent



**Fig 1: Overview of survey flow and treatment assignments.** The n refers to the number of respondents that reach a given box. The full survey questionnaire is included in S18 Appendix.



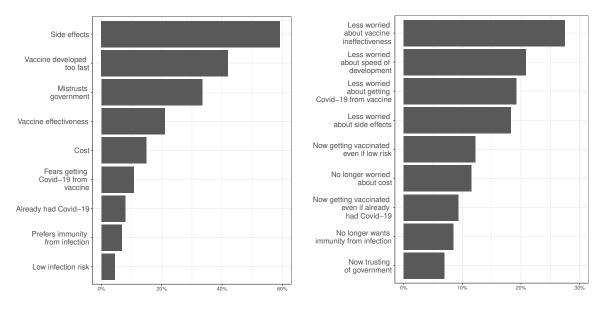
(a) "If a vaccine were available to me now, I would get vaccinated."

(**b**) "If a vaccine were available to you now, how many months would you wait before getting vaccinated?"

**Fig 2: Distribution of vaccine willingness across countries (January 11-29, 2021).** The questions for each figure were asked at the beginning of the survey of all participants. Observations are weighted to match the joint distribution over education, sex, region, and age category from the most recent census in each country.

messaging interventions or additional incentives, herd immunity may be difficult to achieve: only 59% of our sample agreed or strongly agreed that they would take a vaccine once it were available to them, while the average respondent would wait 4.3 months before getting vaccinated. Such hesitancy varies across countries, with willingness ranging from 50% in Chile to 68% in Brazil and from 5.1 months in Chile to 3.5 months in Brazil. Given high levels of mobility within Latin America, all countries could be reduced to the lowest common denominator as borders reopen, further risking the ability of the current generation of vaccines to limit the impact of the pandemic (*37*).

To focus attention on how hesitant individuals respond to our informational and motivational interventions, we screened out respondents who agreed or strongly agreed that they would take a vaccine once available to them *and* would take it within two months of becoming eligible.



(a) Reasons for hesitancy among the hesitant.

(**b**) Responses to vaccine information among respondents that received vaccine information.

**Fig 3: Reasons for initial vaccine hesitancy and response to vaccine information treatments.** Panel (**a**) reports the percentage of hesitant respondents that chose each reason for hesitancy from a multi-response list. Panel (**b**) reports the percentage of respondents that received a vaccine information treatment that chose each reason when asked how the vaccine information affected their concerns about COVID-19 vaccines. The exact questions and responses are shown in S18 Appendix.

The survey proceeded for around 1,200 vaccine-hesitant individuals in each country. As Fig 3a shows, the primary concerns of these hesitant respondents regarded the vaccines' potential side effects (59%), the speed with which the vaccines were developed (42%), mistrust in government (33%), and skepticism of the vaccines' effectiveness (21%). We next describe the treatments that we designed to overcome such concerns about the private health net benefits of COVID-19 vaccination, as well as to capture social and selective incentives that may encourage vaccine uptake among those that remain skeptical.

#### **Treatment conditions**

#### **Informational treatment conditions**

The common component of our vaccine information treatments provided basic facts about COVID-19 vaccines with the goal of informing respondents' private health cost-benefit calculations. The specific informational deficiencies we sought to redress included: that approval of COVID-19 vaccines was based on rigorous medical trials; that these trials show the vaccines are safe and effective at preventing mild and severe forms of COVID-19; and that the side effects are generally minor and the vaccines cannot give you COVID-19. These facts have been the crux of most vaccine messaging campaigns in Latin America and beyond. The full script for each treatment condition, in English and Spanish, is reported in S2 Appendix.

We further investigate what additional types of information could complement the provision of basic vaccine information. As Fig 1 illustrates, we supplemented the basic information treatment in two ways designed to capture potentially important features of citizen behavior emphasized by social scientific theories—the roles of information credibility and collective action dynamics. Our first additional treatment further informed respondents that U.S. President Joseph Biden had already been vaccinated. This supplementary information aimed to reinforce the credibility of the basic vaccine information by documenting the behavior of someone who would be unlikely to act that way if the information were untrue (*38, 39*) or—as a vaccine endorsement by Dr. Anthony Fauci appears to achieve in the U.S. (*40*)—by documenting the behavior of someone with access to medical expertise. When we fielded the survey in January 2021, very few people in Latin America—including none of the Presidents in our sample of countries—had yet been vaccinated. President Biden then represented a reasonable choice for a public figure who might be viewed as unlikely to get vaccinated if the vaccines were not safe.

Second, while basic health information may shift perceptions of the individual health ben-

efits of vaccination, collective factors could be just as important in influencing vaccine uptake. To understand how expectations of others' behavior shapes individual decisions, six further treatment conditions provided information about the national population's need and willingness to vaccinate, in addition to the basic vaccine facts just described.

The first three treatment conditions varied whether respondents were informed that 60%, 70%, or 80% of the population would need to be vaccinated to achieve herd immunity. These numbers, which include low and high expert opinions, were chosen to reflect the differences in opinion among experts at the time the survey was fielded (1). By varying expectations of the level of vaccination needed to achieve herd immunity, we seek to assess whether a greater difficulty of achieving herd immunity reduces willingness to vaccinate or increases willingness to vaccinate. A negative effect could result from increased incentives to free ride by reducing an individual's marginal effect on achieving herd immunity. A positive effect could arise by coordinating expectations around the need for mass vaccine uptake. In addition to comparing individuals exposed to expert opinions of higher or lower herd immunity levels, we can test these hypotheses by comparing respondent's prior belief about the rate of vaccination needed to achieve herd immunity.

The second three conditions relating to collective factors more directly test how vaccination decisions depend on expectations of whether other individuals will actually get vaccinated. Following the approach of researchers studying protest participation (14), these conditions reported the share of the population willing to be vaccinated in the respondent's country, based on recent studies (for early respondents) or on initial data from our survey (for the majority of respondents) in addition to the basic vaccine information and one of the three herd immunity expert opinions previously described. By updating respondents' expectations about the intended behavior of others, the additional information about intended uptake rates could shape incentives to "free ride" on the safety provided by others getting vaccinated (17), induce social learning about the health benefits of vaccination (18), alter perceptions of how to conform with societal norms (20), or update respondent beliefs about the likelihood that getting vaccinated will make them part of a successful collective effort (24). We test the different implications of these hypotheses by examining whether respondents for whom the current level of willingness exceeded or fell below a respondent's prior belief about vaccine uptake rates—or, in the case of wanting to be part of a collective effort, the expert opinion on the level of vaccination required to achieve herd immunity—became more or less willing to vaccinate.

After each element of the treatment was delivered, (non-incentivized) comprehension questions helped respondents absorb the facts provided; the respondent's correct and incorrect answers to these questions were shown after each question. Manipulation checks later in the survey confirm that respondents internalized non-tested information as well (see S4 Appendix). In addition to the eight treatment conditions, we also included a pure control group that received no health information. The design ultimately enables us to compare basic vaccine information or its combination with supplemental information against a control group receiving no such information, as well as to compare the different supplemental information treatments against each other and against the receipt of only the basic vaccine information.

#### **Motivational treatment conditions**

After potential exposure to information about the vaccines and population behaviors, we further examined messages seeking to prime selective incentives to get vaccinated. Motivated by theories of pro-social behavior when the direct private benefits—here, the individual's personal health benefits of vaccinating—of action are regarded as limited, we consider three types of selective incentives that may increase the return to getting vaccinated. First, a social approval message highlighted that, by vaccinating, individuals can show others that they care about their community, and may then gain respect and approval from others in their community. This message seeks to prime respondents that care about others' perceptions of them to consider how getting vaccinated can signal their public-mindedness to others (*41*). Second, an altruistic message aimed to activate a "warm glow"—the satisfaction that individuals receive from helping others, whether due to the benefits that others experience or the joy derived from the act of helping (*31*)—which emphasizes that, by vaccinating, respondents would be contributing to healthier communities and protecting vulnerable populations. Finally, an economic message explained that stopping the spread of COVID-19 is required to help people return to work and therefore, by vaccinating, respondents would be helping the economy recover. This condition seeks to test whether priming the link between vaccination and individual or communal economic prospects generates additional incentives to vaccinate. We compare the impact of these messages against one another, as well as relative to a control group that received no motivational message.

The informational and motivational treatment conditions were cross-randomized, such that respondents could receive one condition from each category. Treatment assignment followed a block randomization procedure that randomly assigned each treatment condition within 144 blocks of respondents defined by their country, initial vaccine willingness, age category, and the time they took the survey. We estimate treatments effects using OLS regressions that adjust for block fixed effects and pre-treatment measures of the outcome, while weighting respondent observations by the inverse probability of treatment assignment; inference is based on robust standard errors and two-tailed t tests. S3 Appendix explains in detail the experimental design and core estimation strategies, which we pre-registered in the Social Science Registry (www.socialscienceregistry.org/trials/7080) before the end of data collection.

#### **Measurement of vaccine willingness outcomes**

Repeating the screening questions shown in Fig 2 several questions after treatments were delivered, our three primary outcomes are: (i) the five-point agree-disagree scale of vaccine willingness, (ii) an indicator for whether a respondent agrees or strongly agrees that they would get vaccinated if a vaccine were available, and (iii) the number of months that a respondent would wait to get vaccinated (which we reverse so positive coefficients always imply greater willingness). In addition to capturing the speed with which vaccine uptake may occur, the intended wait also provides a more fine-grained alternative measure of general vaccine willingness. Furthermore, we investigate social influence—which could play a key role in diffusing messages and consolidating beliefs within communities where engagement with government and media messaging is low or such institutions are not trusted—by asking whether respondents would encourage others to get vaccinated. We focus on an indicator for respondents that are somewhat or very likely to encourage others to get vaccinated, although similar results hold using a four-point scale (see S15 Appendix).

Since our experiment was designed to help inform vaccination communication campaigns as the general public becomes eligible, our analyses pertain to vaccination *intentions* because hardly any individuals were eligible to vaccinate at the time. Previous studies suggest that messaging campaigns can scale up to influence mass health behaviors in other domains (42). Moreover, the risk that respondents answer to please the researcher are likely to be limited by the impersonal online nature of the survey (43); in line with this, we find no evidence of differential effects among more educated respondents that may be more likely to understand the structure of the study or demonstrate pro-social intentions when primed (see S9 and S13 Appendices, respectively). Nevertheless, future studies will be required to validate whether encouragements that affect intentions ultimately influence actual decisions to vaccinate.

#### **Ethics statement**

The full set of experimental protocols was approved by Columbia University's Institutional Review Board (protocol number IRB-AAAT5273). Consent to participate in the study was obtained online after details of the study were described to potential participants.

#### Results

#### **Basic vaccine information increases vaccine willingness**

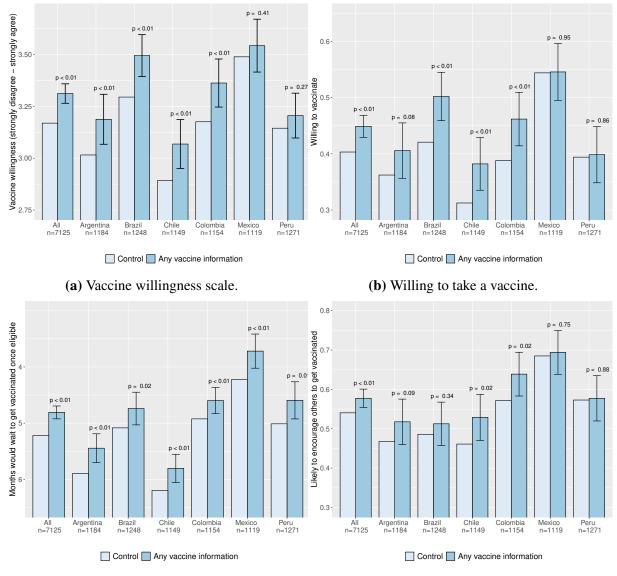
We start by pooling all eight treatment conditions that provide basic facts about the COVID-19 vaccines-what they do, how they were developed, that they are efficacious, and do not cause major side effects. As Fig 4 illustrates, the receipt of any information about vaccines significantly increased vaccine acceptance among the hesitant in Latin America. Panel B shows that receiving this information increased the probability of respondents agreeing or strongly agreeing that they would get vaccinated by 0.046 probability points (95% CI: 0.026 to 0.065). Since 40% of control respondents agreed with this statement, the treatment effect implies that 7.7% of the hesitant were persuaded to take a vaccine. In addition to increasing willingness to vaccinate, panel C shows that vaccine information also reduced the average time that a respondent would wait to vaccinate by 0.41 months (95% CI: 0.30 to 0.52), or about 0.1 standard deviations of the control group distribution. Panel D further shows that vaccine information also increased the probability that respondents would encourage others to get vaccinated by 0.037 probability points (95% CI: 0.014-0.060). Fig 5 reports similar results when comparing the control group with the treatment that only provided basic vaccine information. As Fig 3b illustrates, these effects appear to be driven by reducing concern that the vaccines will be ineffective, were developed too fast, would give people COVID-19, and would produce serious side effects.

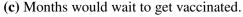
These results collectively suggest that vaccine hesitancy is, in part, driven by limited information about the safety and efficacy of the COVID-19 vaccines; at the same time, our results show that vaccine acceptance can be increased by providing information to quell the main concerns of vaccine hesitant Latin Americans.

The effect of receiving any vaccine information is remarkably similar on hesitant individuals that vary in terms of observable characteristics that could be used as the basis for targeting mass information campaigns. First, Fig 4 shows that the information statistically significantly increased the speed with which individuals reported that they would get vaccinated in each of the six countries under study, their willingness to vaccinate in all countries but México and Perú, and the likelihood of encouraging others to vaccinate in Argentina, Chile, and Colombia. These results suggest that simple factual information about vaccines can overcome the concerns of hesitant individuals in various contexts across Latin America.

Second, as we show in S9 Appendix, we do not observe substantial differences in persuasion across different types of respondent, except by gender. Although the treatment also increased the willingness of men to vaccinate, it was roughly twice as effective among women. This descriptive finding chimes with prior research arguing that women are more risk averse and likely to seek out information pertaining to the health benefits of vaccination (44–46), and suggests that mass campaigns emphasizing basic vaccine information may be more effectively targeted at women. However, we could not detect statistically significant differences in response to treatment by age group, educational attainment, socioeconomic group, or intention to vote for the incumbent President.

We next compare levels of vaccine acceptance between the group that received only basic vaccine information and the groups that also received additional information. The results show that neither informing respondents about the levels of vaccination required to reach herd immunity or current vaccination intentions nor informing respondents that President Biden was





(d) Encourage others to get vaccinated.

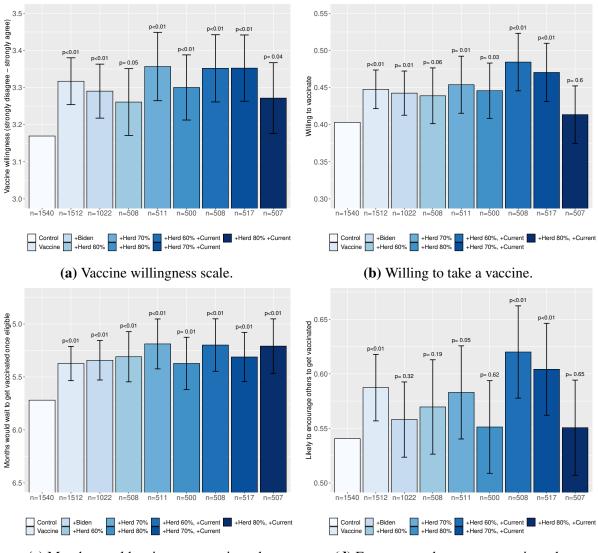
Fig 4: Average effects of any vaccine information treatment on vaccine willingness, by country. Each bar depicts a group outcome mean. The outcome in panel (a) is a five-point vaccine willingness scale ranging from "strongly disagree" (1) to "strongly agree" (5); the outcome in panel (b) is an indicator for "agree" or "strongly agree"; the outcome in panel (c) is the (reversed) number of months that a respondent would wait to get vaccinated once eligible for a vaccine; and the outcome in panel (d) is an indicator for a respondent being "somewhat likely" or "very likely" to encourage others to get vaccinated. Error bars denote 95% confidence intervals for treatment effects relative to the control group; the associated p values are from two-sided t tests. The underlying regression specifications for each outcome are described in S3 Appendix and the underlying regression table is reported in S6 Appendix.

vaccinated systematically produced additional effects on vaccine willingness on average. With the exception of the current willingness treatment combined with 80% being required for herd immunity (discussed below), we cannot reject the null hypothesis that the average effect of the other seven vaccine information treatments on the three individual willingness outcomes is identical. Further analyses detect no statistically significant differences in the reasons given for becoming less hesitant between the different information treatments (see S8 Appendix). The results thus suggest that respondents found the basic vaccine information credible without the "do as I do" endorsement of a prominent public figure in the United States and do not respond to herd immunity information *on its own*.

#### Vaccine willingness is not shaped by free riding, social learning, or social conformity

Theories of peer effects predict that the response to information about the expected behavior of others will vary across individuals, depending on how the information relates to their prior beliefs. This focus on heterogeneous effects differs from the previous section, which focused on *average effects*.

However, we find no evidence to suggest that vaccine willingness is driven by free riding, social learning, or social conformity. Indeed, receiving information about the current level of vaccine willingness in their country *did* cause respondents to substantially update their beliefs about vaccine uptake in line with whether reported willingness was above/below a respondent's prior belief. However, these changes in beliefs *did not* translate into intended behaviors: being informed that current levels of willingness is above (below) prior expectations did not decrease (increase) an individual's vaccine acceptance, as free riding would predict. Similarly, being informed that willingness is above (below) expectations did not increase (decrease) an individual's vaccine acceptance, as free riding would predict. Similarly, being informed that willingness is above (below) expectations did not increase (decrease) an individual's vaccine acceptance, as free riding would predict.



(c) Months would wait to get vaccinated.

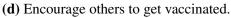


Fig 5: Average effects of vaccine information variants on vaccine willingness. Each bar depicts a group outcome mean, with the sample size in each group reported below. The outcome in panel (a) is a five-point vaccine willingness scale ranging from "strongly disagree" (1) to "strongly agree" (5); the outcome in panel (b) is an indicator for "agree" or "strongly agree"; the outcome in panel (c) is the (reversed) number of months that a respondent would wait to get vaccinated once eligible for a vaccine; and the outcome in panel (d) is an indicator for a respondent being "somewhat likely" or "very likely" to encourage others to get vaccinated. Error bars denote 95% confidence intervals for treatment effects relative to the control group; the associated p values are from two-sided t tests. The underlying regression specifications for each outcome are described in S3 Appendix and the underlying regression table is reported in S6 Appendix.

in the population would predict. S11 Appendix reports these null findings in detail.

# Expecting a vaccination campaign to achieve herd immunity increases vaccine willingness

The role of social interactions may instead depend on expectations of whether herd immunity will be achieved in the respondent's country. Exploring this further, Fig 6 examines how the effect of receiving current population vaccine willingness information alongside an expert herd immunity opinion, relative to only receiving an expert herd immunity opinion, varies with whether the currently expected national willingness rate that the respondent saw—which never exceeded 80% in any country, and averaged 67% across countries—was above or below the expert herd immunity opinion that respondents received.

The results indicate that expecting to be part of a successful vaccination effort increased vaccine acceptance by more than receiving basic vaccine information. Being informed that the currently expected national willingness rate exceeds the expert herd immunity requirement increased vaccine willingness by 0.079 probability points (95% CI: 0.027 to 0.131), whereas being informed that the currently expected national willingness rate is below the expert judgement may even have reduced vaccine willingness (95% CI: -0.061 to 0.011). The same dynamic is evident for the vaccine willingness scale, the speed with which individuals are willing to get vaccinated, and encouraging others to get vaccinated, although the effects are not statistically significant for the number of months that an individual would wait to get vaccinated. As explained in S3 Appendix, by conditioning on the level of willingness reported, these estimates are identified by the experimentally-induced variation in whether the expert herd immunity opinion exceeded or fell below the current level of national willingness reported to the respondent.

Consistent with these findings, our pre-treatment observational data further show that vaccine acceptance was greatest among respondents that expected both a high community uptake

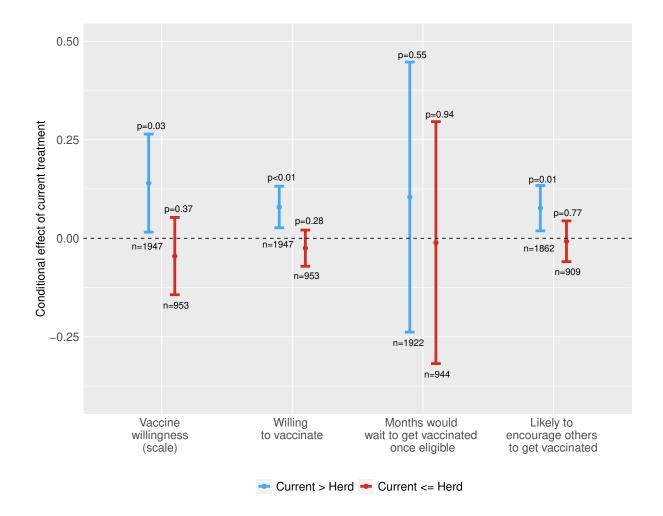


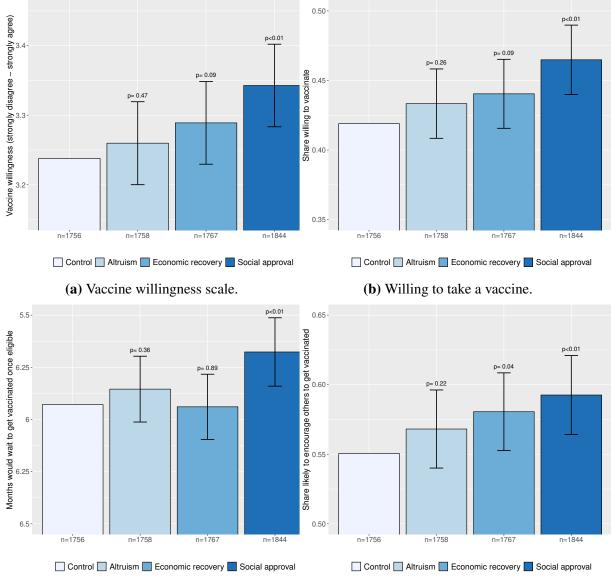
Fig 6: Effects of currently expected willingness information on vaccine willingness, by whether current willingness is above or below the expert herd immunity opinion a respondent was exposed to. Each bar depicts a 95% confidence interval for the conditional average treatment effect of receiving the currently expected national willingness rate treatment, relative to just receiving an expert herd immunity opinion; the associated p values are from two-sided t tests and n captures the number of respondents in each subgroup. The outcome variables arrayed along the x axis are: a five-point vaccine willingness scale ranging from "strongly disagree" (1) to "strongly agree" (5); an indicator for "agree" or "strongly agree"; the (reversed) number of months that a respondent would wait to get vaccinated once eligible for a vaccine; and an indicator for a respondent being "somewhat likely" or "very likely" to encourage others to get vaccinated. The underlying regression specifications for each outcome are described in S3 Appendix and the underlying regression table is reported in S6 Appendix.

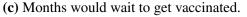
rate and high shares of vaccination to attain herd immunity (see S12 Appendix). Taken together, these results suggest that participating in a collective campaign that is expected to achieve herd immunity may inspire vaccine uptake. This could reflect intrinsic motivations to be part of a "winning team" or—as our next set of findings suggest—social incentives to be seen to be part of such a successful collective effort.

#### Social approval increases vaccine willingness

The desire to participate in a successful coordinated vaccination effort chimes with individuals' responses to our motivation treatments. Comparing the social approval, altruistic, and economic recovery motivational messages, Fig 7 shows that priming the respect that individuals may receive in their community by getting vaccinated plays an important role in overcoming vaccine hesitancy. Specifically, the social approval treatment increased vaccine willingness by 0.046 probability points (95% CI: 0.021 to 0.071), which translates into persuading 7.9% of hesitant respondents—a level comparable to exposure to basic vaccine information. The 0.25 month reduction in how long respondents would wait to get vaccinated (95% CI: 0.09 to 0.42) is a little lower than for basic vaccine information, but non-trivial in magnitude when extrapolated to a national level. Priming the social incentives to get vaccinated also caused individuals to become more likely to encourage others to get vaccinated.

Comparing these effects across different types of individuals suggests that social approval motivates most subgroups. As we show in S13 Appendix, we fail to detect significant differences in the effect of treatment across gender, socioeconomic status, educational attainment, or intention to vote for the President. Although most age groups also responded similarly, there is some evidence to suggest that priming social approval is less effective at motivating respondents aged above 65 to vaccinate. Moreover, social approval neither substantially crowds out nor complements the effects of basic vaccine information; see S14 Appendix. Due to the small





(d) Encourage others to get vaccinated.

Fig 7: Average effects of motivational messages on vaccine willingness. Each bar depicts a group outcome mean. The outcome in panel (a) is a five-point vaccine willingness scale ranging from "strongly disagree" (1) to "strongly agree" (5); the outcome in panel (b) is an indicator for "agree" or "strongly agree"; the outcome in panel (c) is the (reversed) number of months that a respondent would wait to get vaccinated once eligible for a vaccine; and the outcome in panel (d) is an indicator for a respondent being "somewhat likely" or "very likely" to encourage others to get vaccinated. Error bars denote 95% confidence intervals for treatment effects relative to the control group; the associated p values are from two-sided t tests. The underlying regression specifications for each outcome are described in S3 Appendix and the underlying regression table is reported in S6 Appendix.

size of some subgroups, some caution should be exercised in interpreting these effects because the analyses could only detect substantial differences in treatment effect across subgroups.

In contrast, we find no evidence to suggest that priming altruistic motives encourages vaccine acceptance among hesitant Latin Americans. The economic recovery motivation, which could be interpreted either in selfish or pro-social terms, increased willingness to get vaccinated by 0.022 probability points (95% CI: -0.003 to 0.046), but was not statistically significant at the 95% level using a two-tailed test and had little effect on the number of months that a respondent would get vaccinated (95% CI: -0.17 to 0.15).

# Discussion

Across six major Latin American countries, we document moderate—albeit cross-nationally varying—levels of vaccine hesitancy. In January 2021, little more than half the adult population was willing to take a vaccine, while similar numbers would take a vaccine within 3 months of becoming eligible. Even if willingness increases as vaccine programs roll out, uptake may be too low or too slow to achieve herd immunity and prevent the spread of new COVID-19 variants that could overcome the immunity conferred by vaccines and recent exposure to the virus. By showing that hesitancy reflects informational and coordination problems, our results suggest that intended behaviors are malleable and effective public messaging could significantly increase both vaccine uptake and the speed of uptake among the hesitant. Our online experiment shows that providing basic information about vaccines, encouraging individuals to believe that they could be part of a successful collective effort, and harnessing the reputational benefits of vaccination that people expect to receive can all reduce vaccine hesitancy.

By illuminating the theoretical mechanisms that drive hesitancy of the COVID-19 vaccines and the types of messages that can overcome them, our findings can inform the design of public health communication strategies and vaccine distribution. In terms of communication strategies, we show that information about safety and efficacy counteracts skepticism about the new vaccines among hesitant individuals. Saturating public discourse or microtargeting more hesitant demographic groups with such information may then increase uptake in the population both by directly persuading individuals but also through social amplification mechanisms—given the apparent desire both for social approval and, once informed, to encourage others to vaccinate. Although the message may not convince ardent anti-vaxxers, it appears to resonate with many types of respondent that have concerns about the COVID-19 vaccines. It also remains possible that observing domestic figures—such as politicians or local health care providers, who had not yet generally been vaccinated when our study was fielded—could more effectively signal the credibility of basic vaccine information than foreign leaders like President Biden.

Our finding that vaccine willingness is not simply a private cost-benefit calculation further suggests that, in tandem with emphasizing the safety and efficacy of COVID-19 vaccines, policymakers may increase vaccine uptake by making vaccine uptake observable in at least two different ways. First, organic social approval mechanisms could be amplified by interventions through which individuals can show peers that they have been vaccinated. This could involve "I got vaccinated" stickers or wristbands, the use of vaccine passports, or ways of sharing vaccination status on social media. Second, rather than worry about free-riding or encouraging individuals to feel a warm glow from helping others, our findings suggest that policymakers should make aggregate uptake rates visible—whether in the news, through official briefings, or more direct messaging (in person or through ads)—as vaccination levels approach herd immunity. As our results indicate, the belief that vaccination rates will reach the level required to achieve herd immunity will encourage the hesitant to join a successful herd immunity drive. Such upbeat communication—which has been rare, relative to news coverage of low-probability risks associated with certain vaccines and concerns about fake news—might be enhanced by emphasizing winning together as a "team", perhaps by including groups that inspire camaraderie like sports teams in campaign programming. Since the value of social approval could decline as vaccination rates increase (41), at the same time that the likelihood of attaining herd immunity increases, efforts to activate social dynamics may be most effectively sequenced to initially emphasize social approval mechanisms, before later shifting toward the positive messaging about reaching herd immunity.

The implications of our online experiment for the design of mass vaccinations campaigns are also limited in several ways. First, as our study was conducted before mass vaccination campaigns begin, we could not behaviorally measure vaccine uptake in the general population because vaccines were hardly available. Even though initial intentions translate into actual vaccination cannot be assessed until the general population becomes eligible, our results demonstrate that vaccine concerns can-at least temporarily-be overcome by suitable messages. Second, our messages were delivered once in a controlled survey context, rather than in a more complex environment where many messages compete and are repeated. While the effect of a single message is unlikely to endure until vaccines become generally accessible, communication campaigns may be able to achieve similar results by intensively delivering effective messages. Indeed, given that most government and civil society programs involve repeated exposure to information, further testing should identify the number of exposures required to consolidate vaccine willingness. Third, by focusing on encouraging hesitant respondents to vaccinate, we did not study whether the messages could discourage individuals that were already willing to vaccinate. Beyond weakening social approval incentives, backfiring of this form appears unlikely if individuals are more willing to vaccinate when others are vaccinating (and thus herd immunity is more likely to be achieved).

Despite these limitations, our evidence ultimately highlights the *types* of messaging and programming that may combat COVID-19 vaccine hesitancy in Latin America—and perhaps

beyond, given related findings in the Global North (6, 8). Although careful design is needed to generate policies that cultivate similar responses to the treatments in our controlled study environment, we show that campaigns to redress informational deficiencies and harness social dynamics could persuade hesitant individuals to vaccinate and thereby help countries more quickly vaccinate significant shares of their populations.

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# Supporting information for:

# Messages that increase COVID-19 vaccine acceptance: Evidence from online experiments in six Latin American countries

#### Contents

<b>S1</b>	Survey registration, recruitment, and screening	3
S2	Vaccine information and motivational message treatment conditions	5
<b>S</b> 3	Experimental design and estimation strategies	9
<b>S4</b>	Manipulation checks	16
S5	Measurement of outcome variables	16
<b>S6</b>	The main results in regression table form	19
<b>S7</b>	Identification checks	19
<b>S8</b>	Differential effects of vaccine information treatments on reasons given for	
	reducing hesitancy	34
S9	Heterogeneity in the effect of basic vaccine information	34
S10	Heterogeneity in the effect of herd immunity information	37
S11	Heterogeneity in the effect of current willingness information	37

S12	Pre-treatment vaccine hesitancy and prior beliefs	39
S13	Heterogeneity in the effect of motivational messages	41
S14	Interaction between informational and motivational messages	42
S15	Effects on encouraging others to vaccinate measured as a scale	42
S16	Demand for further information	42
S17	Population-weighted treatment effects	48
S18	Full survey questionnaire	61

# S1 Survey registration, recruitment, and screening

#### Recruitment

Respondents in each country were recruited via Netquest's online panels between January 11 and January 29, 2021. Netquest maintains large panels of survey respondents in most Latin American countries, including at least 125,000 panelists in all six countries in this study. Panelists are regularly invited to take surveys, although this is not their primary vocation. Netquest's dynamic enrollment protocols updated invitations to ensure that the sample frame was nationally representative in terms of sex, age category, socioeconomic status, and region. Upon clicking a link to participate, respondents reached a Qualtrics landing page, where information about the academic study was provided and consent to participate in the study was obtained. As the summary statistics in Table S1 verify, the marginal distribution of respondents that started the survey (i.e. reached our screening juncture) closely approximated the Census distribution for these variables. Unsurprisingly for an online survey, respondents are less representative in terms of education, which Netquest did not seek to balance with population averages.

#### Screening

In addition to screening out respondents who were already willing to take a vaccine within less than 2 months of it becoming available, we also screened out respondents aged below 18 (n=9) or who failed our attention check eleven questions into the main survey (by failing to correctly identify the capital city of their country; n=11). Given these few screen outs, our sample of hesitant respondents is also likely to be broadly nationally representative of this subgroup. The median completed survey lasted 26 minutes; respondents who completed the survey were compensated with approximately 3 US dollars. Respondents who took less than 10 minutes to

	Arge	Argentina	Brazil	azil	Ch	Chile	Colo	Colombia	Me	Mexico	Pe	Peru
	Survey	Census	Survey	Census	Survey	Census	Survey	Census	Survey	Census	Survey	Census
Age	44.34	47.33	40.69	41.34	44.54	44.18	39.82	42.54	39.17	42.44	39.7	41.99
Male	0.49	0.53	0.50	0.49	0.51	0.48	0.48	0.48	0.49	0.48	0.47	0.48
Socioeconomic												
status												
Low	0.17	0.13	0.28	0.26	0.33	0.42	0.49	0.43	0.33	0.33	0.49	0.42
Middle	0.77	0.8	0.64	0.66	0.58	0.48	0.40	0.45	0.45	0.46	0.45	0.50
High	0.06	0.07	0.07	0.08	0.10	0.10	0.11	0.12	0.21	0.21	0.06	0.08
Education												
None	0.00	0.13	0.06	0.11	0.01	0.00	0.01	0.05	0.00	0.14	0.01	0.05
Primary	0.13	0.43	0.11	0.49	0.07	0.23	0.02	0.38	0.03	0.16	0.01	0.20
Secondary	0.48	0.32	0.53	0.27	0.47	0.46	0.32	0.29	0.44	0.54	0.36	0.51
Higher	0.23	0.07	0.21	0.13	0.28	0.22	0.51	0.16	0.31	0.14	0.34	0.14
Other higher	0.15	0.06	0.09		0.18	0.10	0.14	0.11	0.22	0.01	0.28	0.10
Table S1: Summary statistics amo	nary stat	istics am	ong pre-s	creened	responde	nts by co	untry. T	he survey	data pert	ng pre-screened respondents by country. The survey data pertain to our pre-screened	pre-scre	ened

s among pre-screened respondents by country. The survey data pertain to our pre-screened	a, with the exception of the data for socioeco-	
Table S1: Summary statistics among pre-screened respondents by countr	sample. The Census data is drawn from the most recent available Census data, with the exception of the data for socioeco-	nomic level, which was provided by Netquest.

complete the survey (n=47) were excluded from the experimental analyses.

# S2 Vaccine information and motivational message treatment conditions

The following script shows the full information script received by different vaccine information treatment groups, in both English and then Spanish (the Portuguese translations are available upon request):

[Control and all treatment groups] Latin American countries are beginning to distribute their first doses of vaccines.

Los países de Latinoamérica están comenzando a distribuir sus primeras dosis de vacunas.

[*All treated groups*] The next screen will provide **important information about these COVID-19 vaccines**.

Vaccines are designed to **prevent disease**.

After **extensive testing by medical experts**, different countries have approved the use of various vaccines against COVID-19.

Clinical tests have shown that the vaccines are **safe and highly effective** in preventing mild and severe COVID-19 infections. The **side effects are generally minor** and you cannot get COVID-19 from the vaccine.

La siguiente pantalla proporcionará **información importante sobre estas vacunas** contra el COVID-19.

Las vacunas están diseñadas para prevenir enfermedades.

Después de **pruebas exhaustivas realizadas por expertos médicos**, se ha aprobado el uso de varias vacunas contra el COVID-19 en diferentes países.

Las pruebas clínicas han demonstrado que las vacunas son **seguras y altamente eficaces** en prevenir infecciones leves y graves de COVID-19. Los **efectos secundarios son generalmente menores** y no se puede contraer COVID-19 de una vacuna.

[*Biden treatment group only*] A few weeks ago, **President Joe Biden safely received a vaccine** against COVID-19 in the United States.

Hace algunas semanas, **el presidente Joe Biden recibió, de manera segura, una vacuna** contra el COVID-19 en los Estados Unidos.

[*Herd and Current treatments conditions only*] If enough people get vaccinated against COVID-19, the coronavirus will stop spreading.

Some experts say that at least [60/70/80]% of people need to be vaccinated to prevent the spread of the coronavirus.

Si suficientes personas se vacunan contra el COVID-19, el Coronavirus dejará de propagarse.

Algunos expertos dicen que al menos [60/70/80]% de las personas necesitan vacunarse para evitar la propagación del Coronavirus.

[Current treatments conditions] Recent data indicates that X% of people in [COUN-

TRY] currently say they would get vaccinated against COVID-19.

Datos de esta encuesta indican que X% de las personas en [COUNTRY] actual-

mente dicen que se vacunarían contra el COVID-19.

The control group only received the basic text in black, while the Vaccine, Herd, and Current components of the information treatments were successively shown on further screens (the Current information was shown together with the Herd expert opinion). The expert opinion of the vaccination rate required to achieve herd immunity randomly varies across treatment variants

				Info	rmatio	n abou	ıt vacci	nes?			
								Vaco	cine + l	Herd	
				Vaccine +	Vaco	cine + I	Herd	+	Curre	nt	
		None	Vaccine	Biden	60%	70%	80%	60%	70%	80%	Pooled
	None	3/56	3/56	1/28	1/56	1/56	1/56	1/56	1/56	1/56	1/4
Motivational	Altruism	3/56	3/56	1/28	1/56	1/56	1/56	1/56	1/56	1/56	1/4
message?	Economic recovery	3/56	3/56	1/28	1/56	1/56	1/56	1/56	1/56	1/56	1/4
	Social approval	3/56	3/56	1/28	1/56	1/56	1/56	1/56	1/56	1/56	1/4
	Pooled	3/14	3/14	1/7	1/14	1/14	1/14	1/14	1/14	1/14	

**Table S2: Informational treatments factorial design.** The numbers in each cell indicate the share of the sample randomized into each condition within each country.

reporting 60%, 70%, or 80%—the most frequently cited numbers cited by experts around the time the survey was designed. Respondents that received the Current component of the information treatment were informed of the rate of vaccine willingness in their country according to recent surveys (for the first around 200 respondents per country) or the early respondents to this survey (all subsequent respondents). The text was all shown in black, but the emboldened sections were emboldened within Qualtrics. In each treatment condition, respondents were given a quick quiz to ensure that they internalized key information on each screen.

The eight different treatment groups are described in Table S2. The probability distribution used for the randomization assignment of conditions is arrayed along the x axis.

After receiving the information treatments described in the previous section, respondents were independently randomly assigned to receive a motivational message. A control group received no message, while the altruism, economic recovery, and social approval messages are shown below in English and then Spanish (the Portuguese translations are available upon request):

[Altruism] Getting vaccinated against COVID-19 helps stop the spread of COVID-

19 and thus prevents the most vulnerable from getting sick.

By getting vaccinated against COVID-19, you will help keep others in your com-

#### munity healthy.

Vacunarse contra el COVID-19 ayuda a detener la propagación del COVID-19 y así evita que los más vulnerables se enfermen.

Si usted se vacuna contra el COVID-19, ayudará a mantener saludables a otros en su comunidad.

*[Economic recovery]* The faster [COUNTRY] can stop the spread of COVID-19, the faster people will get back to work.

If you get vaccinated against COVID-19, you will help the economy recover.

Cuanto más rápido [COUNTRY] pueda detener la propagación de COVID-19, más rápido las personas volverán a trabajar.

Si usted se vacuna contra el COVID-19, ayudará a que la economía se recupere.

[Social approval] Getting vaccinated against COVID-19 shows that you care about others in your community.

If you get vaccinated against COVID-19, you will be respected by the people in your community.

Vacunarse contra el COVID-19 demuestra que usted se preocupa por los demás en su comunidad.

Si usted se vacuna contra el COVID-19, será respetado por las personas en su comunidad.

As shown in Table S2, these motivational treatments were cross-randomized with respect to the vaccine information with equal probability.

				Info	rmatio	n abou	t vacci	nes?			
								Vaco	cine + l	Herd	
				Vaccine +	Vaco	cine + I	Herd	+	Curren	nt	
		None	Vaccine	Biden	60%	70%	80%	60%	70%	80%	Pooled
	None	378	406	274	143	127	124	128	121	143	1,844
Motivational	Altruism	401	365	254	121	127	111	128	130	119	1,756
message?	Economic recovery	386	351	245	124	128	139	128	133	124	1,758
	Social approval	375	390	249	120	129	126	124	133	121	1,767
	Pooled	1,540	1,512	1,022	508	511	500	508	517	507	7,125

**Table S3: Distribution of treatments assignments.** The numbers in each cell indicate the number of respondents randomized into each condition (pooling across countries).

# S3 Experimental design and estimation strategies

#### **Treatments and randomization**

The full text for each treatment condition is provided in S2 Appendix. Both the information and motivational treatments were assigned within 144 blocks defined by country (6 possible values), pre-treatment vaccine willingness (6 possible values), and age category (4 possible values). Within each block, sequential complete randomization was used to assign treatments within Qualtrics. Table S3 reports the realized distribution of treatment assignments. The corresponding treatment assignment probabilities are reported in S2 Appendix.

### Measurement of outcome variables

The full question and set of answers for each outcome variable is described in S5 Appendix.

#### Weighting of data

To maximize the representativeness of the descriptive data in Fig 2 in the main article, we apply population weights based on the most recent census. In particular, we weight respondents to match the population distribution at the education (none, primary, secondary, university, other

higher)  $\times$  sex (male, female)  $\times$  region (multiple regions that differ by country)  $\times$  age category (multiple categories that differ by country) cell level within each country. To maximize statistical power, we estimate treatment effects without applying population weights; however, we report qualitatively similar, if slightly larger and less precise, effects when such weights are applied in S17 Appendix. We also demonstrate robustness to using rake weights that achieve national representativeness over the marginal distribution of each covariate in S17 Appendix.

#### Estimating average treatment effects of vaccine information

We estimate the effect of each of the eight vaccine information treatments separately using the following pre-specified OLS regression:

$$Y_{ic} = \alpha_{bc} + \beta Y_{ic}^{pre} + \tau_1 Vaccine_{ic} + \tau_2 Vaccine and Biden_{ic} + \sum_{k=60,70,80} \tau_3^k Vaccine and Herd k\%_{ic} + \sum_{k=60,70,80} \tau_4^k Vaccine and Herd k\% and Current_{ic} + \varepsilon_{ic},$$
(1)

where  $Y_{ic}$  is an outcome for respondent *i* in country *c*,  $\alpha_{bc}$  are block × country fixed effects,  $Y_{ic}^{pre}$  is a standardized version of the pre-treatment number of months that respondent *i* would wait to get vaccinated once eligible,  $Vaccine_{ic}$  is an indicator for the basic vaccine information provided about COVID-19 vaccines,  $Vaccine and Biden_{ic}$  is an indicator for additionally being informed that Biden was vaccinated, Vaccine and Herd k% is an indicator for receiving the basic vaccine information and being informed that experts believe that at least  $k \in \{60, 70, 80\}$  percent of individuals will need to get vaccinated to prevent the spread of COVID-19, and Vaccine and Herd k% and  $Current_{ic}$  indicates respondents are further informed of their country's current rate of vaccine willingness. Between the fixed effects and the lagged outcome, we adjust for baseline pre-treatment hesitancy responses and increase statistical power. All observations are weighted by the inverse probability of treatment assignment and heteroskedasticity-robust standard errors are used in all regression analyses. Each  $\tau$  coefficient estimates an average treatment effect of the corresponding treatment.

When pooling across information treatments, we estimate the following pre-specified OLS regression:

$$Y_{ic} = \alpha_{bc} + \beta Y_{ic}^{pre} + \tau Any \ vaccine \ information_{ic} + \varepsilon_{ic}, \tag{2}$$

where Any vaccine information<sub>ic</sub> indicates that respondent *i* received any information treatment and  $\tau$  is the associated average treatment effect. All regression specifications were prespecified in equivalent form or noted in the text of our pre-analysis plan, which is publicly available at the Social Science Registry (www.socialscienceregistry.org/trials/7080), unless noted otherwise.

## Estimating treatment effects of belief updating about herd immunity and current aggregate willingness to vaccinate

To estimate the effect of beliefs about the level of vaccination required to achieve herd immunity, conditional on having receiving basic vaccine information, we leverage experimental variation in whether a respondent was informed that experts believe 60%, 70%, or 80% of the population is required to achieve herd immunity. The direction of updating is not random, because this depends on a respondent's prior belief. However, conditional on a given prior belief, the direction of induced belief updating randomly varies with the expert opinion regarding the vaccination rate required to achieve herd immunity. We exploit such variation by estimating the following OLS regression among the subset of respondents that received a treatment containing information about herd immunity levels:

$$Y_{ic} = \alpha_{bc} + \beta Y_{ic}^{pre} + \tau \mathbb{1}[Herd\ prior_{ic} < k_{ic}] + \sum_{p} \eta_p \mathbb{1}[Herd\ prior_{ic} = p] + \varepsilon_{ic}, \tag{3}$$

where the treatment  $\mathbb{1}[Herd \ prior_{ic} < k_{ic}]$  is an indicator for respondent *i*'s prior belief Herd  $prior_{ic}$  (the percentage  $p \in [0, 100]$  of the population that needs to get vaccinated to stop the propagation of COVID-19, which was elicited pre-treatment) being below the reported expert opinion on the herd immunity rate  $k_{ic}$ , and  $\tau$  is the associated average treatment effect. As robustness checks, we examine more fine-grained updating treatments in S10 Appendix. This approach to estimating the effect of the herd immunity level reported was not prespecified, but complements our prespecified approach comparing the effects of the conditions providing expert opinions of 60%, 70%, and 80% herd immunity requirements.

To estimate heterogeneous effects of being informed of the current level of national willingness to vaccinate with respect to a respondent's prior belief, conditional on having receiving basic vaccine information, we estimate the following OLS regression:

$$Y_{ic} = \alpha_{bc} + \beta Y_{ic}^{pre} + \tau_1 Current_{ic} + \tau_2 (Current_{ic} \times \mathbb{1}[Willing \ prior_{ic} < r_{ic}]) + \eta \mathbb{1}[Willing \ prior_{ic} < r_{ic}] + \varepsilon_{ic},$$
(4)

where  $Current_{ic}$  is an indicator for *i* receiving information about the current rate of vaccine willingness (where the comparison group contains control respondents and respondents that received other treatment conditions that did not report current willingness), and  $\mathbb{1}[Willing prior_{ic} < r_{ic}]$  is an indicator for a respondent's prior belief about the willingness rate in their community being below the national willingness rate  $r_{ic} \in \{56, 57, 58, 61, 64, 66, 67, 73, 75, 79\}$  reported (or that would have been reported if treated).  $\tau_1$  then estimates the effect of being informed about the current level of national vaccine willingness among respondents encouraged to update upwards about the current national rate of vaccine willingness, while  $\tau_1 + \tau_2$  captures the effect of treatment among respondents encouraged to update downwards about the current national rate of vaccine willingness.

We further estimate the effect of providing information relating expert opinions on herd

immunity requirements to current rates of vaccine willingness, conditional on having receiving basic vaccine information. Following our approach to estimating the effect of exposure to different expert opinions about herd immunity, whether the expert herd immunity rate opinion that a respondent received is above or below the current rate of vaccine willingness was randomly assigned, conditional on the country's current rate of willingness. Interacting this variation in potential belief updating with whether a respondent received information about the current rate then captures the effect of learning that the current rate is above or below the expert herd immunity rate, beyond exposure to a given expert herd immunity opinion. We estimate this effect using the following OLS regression among the subset of respondents that received a herd immunity treatment:

$$Y_{ic} = \alpha_{bc} + \beta Y_{ic}^{pre} + \tau_1 Current_{ic} + \tau_2 \mathbb{1}[r_{ic} < k_{ic}] + \tau_3 (Current_{ic} \times \mathbb{1}[r_{ic} < k_{ic}])$$
  
+ 
$$\sum_p \eta_p \mathbb{1}[r_{ic} = p] + \sum_p \xi_p (Current_{ic} \times (\mathbb{1}[r_{ic} = p] - \mu_p)) + \varepsilon_{ic},$$
(5)

where  $\mathbb{1}[r_{ic} < k_{ic}]$  is an indicator for respondents for whom the expert opinion for the level of vaccination required to achieve herd immunity exceeded the current level of vaccine willingness,  $r_{ic}$ , in the respondent's country, and thus  $\tau_1$  and  $\tau_1 + \tau_3$  estimate the effect of being informed that the current rate is above and below, respectively, what experts believe is required to attain herd immunity. The interactions between the (demeaned) fixed effects for the current rate at the time of the survey,  $(\mathbb{1}[r_{ic} = p] - \mu_p)$  for each level of current willingness, and  $Current_{ic}$  are included to identify the effect of  $Current_{ic} \times \mathbb{1}[r_{ic} < k_{ic}]$ ; the fixed effects in the estimation sample are demeaned to ensure that  $\tau_1$  captures the conditional average treatment effect when  $r_{ic} < k_{ic}$ . This subtle strategy for estimating the effect of how the current willingness rate relates to the expert opinion was only recognized by the research team after conducting the experiment, and was thus not prespecified.

#### **Estimating treatment effects of motivation messages**

We estimate the effect of the three motivation messages by comparing each message to the control group receiving no message using the following pre-specified OLS regression:

$$Y_{ic} = \alpha_{bc} + \beta Y_{ic}^{pre} + \tau_1 Altruism_{ic} + \tau_2 Economic \ recovery_{ic} + \tau_3 Social \ approval_{ic} + \varepsilon_{ic}, \ (6)$$

where  $Altruism_{ic}$ ,  $Economic \ recovery_{ic}$ , and  $Social \ approval_{ic}$  indicate whether respondent i received the respective treatment. Observations are unweighted due to the equal probabilities of treatment assignment. Each  $\tau$  coefficient estimates an average treatment effect of the corresponding treatment.

#### **Estimating heterogeneous treatment effects**

To examine heterogeneity in the effect of the basic vaccine information treatment, we estimate OLS regressions of the following form:

$$Y_{ic} = \alpha_{bc} + \beta Y_{ic}^{pre} + \tau_0 Any \ vaccine \ information_{ic}$$
$$+ \boldsymbol{\tau}_1 (Any \ vaccine \ information_{ic} \times \mathbf{X}_{ic}) + \boldsymbol{\gamma} \mathbf{X}_{ic} + \varepsilon_{ic}, \tag{7}$$

where  $\mathbf{X}_{ic}$  is a vector of predetermined respondent-level characteristics. To estimate heterogeneity in the effect of the motivational treatments, we estimate analogous equations where we replace *Any vaccine information<sub>ic</sub>* with indicators for the three motivational messages.

#### Statistical inference

All statistical inferences are derived from two-tailed t tests and 95% confidence intervals based on the regressions previously described. The two-tailed tests are more conservative than the one-tailed tests for positive average treatment effects than we pre-specified.

#### **Computing persuasion rates**

Following standard practice in the information and persuasion literature (47), we compute the persuasion rate as:  $100 \times \frac{ATE}{1-Y_0}$ , where ATE is a given average treatment effect of interest and  $Y_0$  is the (post-treatment) control group mean outcome. The persuasion rate captures the share of the non-willing that become willing due to treatment. Since all treated respondents were directly exposed to treatment, we do not adjust for the share of respondents that engaged with treatment.

#### Support for the identifying assumptions

The average treatment effects are identified under two assumptions: (i) the stable unit treatment value assumption (SUTVA); and (ii) unconfounded treatment assignment. SUTVA almost certainly holds because interference between respondents between start and end of the survey is implausible in the large countries under study and because versions of treatment were controlled by the research team. Although treatments were randomly assigned, identification of causal effects could be confounded by chance imbalances or differential attrition across treatment groups. As S7 Appendix shows, neither potential concern drives the results and the results are robust to bounding our estimates to address differences in attrition (48). The identification conditions for conditional average treatment effects are analogous within subgroups.

#### **Implementation of statistical analyses**

All statistical analyses were implemented in R, with the exception of initial data cleaning and implementation of the bounding exercises that were conducted in Stata.

## S4 Manipulation checks

To test whether the vaccine information was internalized by treated respondents, we asked two questions later in the survey about the basic vaccine information received by all treated respondents. This information was not included in the comprehension quiz that appeared with each component of the treatment information. In particular, respondents were asked whether vaccines had yet been approved in some countries and whether there were only minimal side effects of the vaccines. The results in Table S4 show that respondents receiving any vaccine information were almost 0.05 probability points more likely to answer the first question correctly, relative to an already high share of respondents in the control group that answered correctly (0.78), and 0.11 probability points more likely to answer the second more difficult question correctly. Although there was some heterogeneity by specific information treatment (even though all treated respondents received the information relating to the questions), all conditions significantly increased vaccine knowledge. The smaller effects associated with the treatments including information about the current level of willingness in a respondent's country suggests a possibility for information overload.

## **S5** Measurement of outcome variables

We focus on four primary outcome variables capturing intention to vaccinate:

 Vaccine willingness scale: a five-point scale ranging from "strongly disagree" (1) to "strongly agree" (5) capturing a respondent's willingness to get vaccinated if a vaccine were available. The specific question was: "To what extent do you agree or disagree? If a vaccine against COVID-19 were available, I would get vaccinated. Strongly disagree? Disagree? Neither agree nor disagree? Agree? Strongly agree? Not sure?" In Spanish, this read as: "¿Hasta qué punto está usted de acuerdo o en desacuerdo? Si una vacuna

	0.4	• • •
		variables:
	Know that	Know that
	vaccines	there are
	were	minimal
	approved	side effects
Panel A: Pooled across vaccine	e information	n treatments
Any vaccine information	$0.044^{***}$	$0.110^{***}$
	(0.011)	(0.014)
Outcome range	$\{0,1\}$	{0,1}
Control outcome mean	0.78	0.45
Control outcome std. dev.	0.42	0.50
Observations	7,033	7,019
$R^2$	0.078	0.095
Panel B: By vaccine information	on treatment	t condition
Vaccine	0.035**	0.091***
, acome	(0.015)	(0.018)
Vaccine + Biden	0.034**	0.084***
	(0.016)	(0.020)
Vaccine + Herd 60%	0.085***	0.137***
	(0.019)	(0.025)
Vaccine + Herd 70%	0.078***	0.143***
	(0.019)	(0.025)
Vaccine + Herd 80%	0.084***	0.153***
	(0.019)	(0.025)
Vaccine + Herd 60% + Current	0.016	0.151***
	(0.021)	(0.025)
Vaccine + Herd 70% + Current	0.030	0.094***
	(0.020)	(0.025)
Vaccine + Herd 80% + Current	0.033	0.095***
	(0.020)	(0.025)
Outcome range	$\{0,1\}$	{0,1}
Control outcome mean	0.78	0.45
Control outcome std. dev.	0.42	0.50
Observations	7,033	7,019
$R^2$	0.074	0.103

Table S4: Vaccine information comprehension tests. All specifications include country  $\times$  block fixed effects and (standardized) pre-treatment wait until vaccination as covariates (omitted to save space), weight observations by the inverse probability of treatment assignment, and are estimated using OLS. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

contra el COVID-19 estuviera disponible, yo me vacunaría. Muy en desacuerdo? En desacuerdo? Ni de acuerdo ni en disacuerdo? De acuerdo? Muy de acuerdo? No estoy seguro?"

- 2. *Willing to take a vaccine*: an indicator coded one for respondents that answered "agree" or "strongly agree" to the previous question.
- 3. Months would wait to get vaccinated: number of months, top-coded at 12, that a respondent would wait to get vaccinated if a COVID-19 vaccine were available to you now. The specific question was: "If a vaccine against COVID-19 were available to you now, how many months would you wait before get vaccinated? Number of month: ...? I would not take a vaccine?" In Spanish, this read as: "Si una vacuna contra el COVID-19 estuviera disponible para usted ahora, ¿cuántos meses esperaría antes de vacunarse? Numero de meses: ...? Nunca tomaría una vacuna?"
- 4. Encourage others to get vaccinated: an indicate coded 1 for respondents that responded "somewhat likely" or "very likely" to the following question: "How likely are you to encourage family or friends to get vaccinated? Never? Unlikely? Somewhat likely? Very likely?" In Spanish, this read as: "¿Qué tan probable es que motive a familiares o amigos a que se vacunen? Nada probable? Poco probable? Algo probable? Muy probable?"

(Portuguese translations are available upon request.) These questions appeared a few screens after the motivation treatments were delivered. Identical versions of the first three variables were elicited at the beginning of the survey to determine whether a respondent would be screened based on already being willing to take a vaccine (see S1 Appendix for more information about screening). While the first three outcomes were pre-specified as primary outcomes, we included the encourage others outcome in light of the positive effect and the high salience of social dynamics in our findings.

Since we could not measure actual vaccination because vaccine rollouts in Latin America were limited at the time of the study, we tried to measure vaccine willingness behaviorally by assessing whether respondents choose to receive additional information about COVID-19 vaccines from the Pan American Health Organization (PAHO) and ultimately clicked through to their website. To measure the latter, we wrote code to verify whether the link on the Qualtrics page was clicked. These variables provide behavioral measures of interest in obtaining further information about COVID-19 vaccines. However, this may only imperfectly correlate with vaccine willingness intentions because further information may not be required to convince individuals after treatment. (At the time of the study, government websites did not have online sign-up portals that would have represented a more direct behavioral measure of interest in taking a vaccine.) Accordingly, we do not focus on this outcome in our main analysis; since it was pre-specified, we report the results for whether a respondent requested to receive the link and actually clicked through below in S16 Appendix.

## S6 The main results in regression table form

Tables S5-S8 report the regression estimates that underlie Figs 4-7.

## S7 Identification checks

As noted in S3 Appendix, our estimation of treatment effects relies on two assumptions: SUTVA and unconfounded treatment assignment. While SUTVA almost certainly holds in our context of online surveys where around 1,000 individuals were randomly assigned treatments in each country, there remains a risk that the random assignment of treatments could be broken by differences in attrition—that is to say in the likelihood of continuing the survey to answer post-treatment outcomes across—across experimental groups. We examine differences in attrition

		Outco	me variable:	
			Months would	_
	Vaccine	Willing	wait to get	Encourage
	willingness	to take a	vaccinated	others to ge
	scale	vaccine	(reversed)	vaccinated
	(1)	(2)	(3)	(4)
Panel A: All countries po				
Any vaccine information	$0.143^{***}$	$0.046^{***}$	0.410***	$0.037^{***}$
	(0.024)	(0.010)	(0.058)	(0.012)
Outcome range	[1,5]	$\{0,1\}$	[0,12]	$\{0,1\}$
Control outcome mean	3.17	0.40	5.78	0.54
Control outcome std. dev.	1.18	0.49	4.38	0.50
Observations	6,951	6,951	6,876	6,659
$R^2$	0.483	0.492	0,766	0.356
	0.000	0.202		
Panel B: Argentina	0.172***	$0.043^{*}$	0.449***	$0.050^{*}$
Any vaccine information				
	(0.062)	(0.025)	(0.131)	(0.029)
Outcome range	[1,5]	$\{0,1\}$	[0,12]	{0,1}
Control outcome mean	3.02	0.36	5.11	0.47
Control outcome std. dev.	1.18	0.48	4.45	0.50
Observations	1,160	1,160	1,150	1,109
$R^2$	0.442	0.462	0.801	0.351
Panel C: Brazil				
Any vaccine information	0.200***	0.081***	0.344**	0.027
any vaccine mormation	(0.052)	(0.081)	(0.344) (0.148)	(0.027) (0.028)
	(0.052)	(0.022)	(0.140)	(0.020)
Outcome range	[1,5]	$\{0,1\}$	[0,12]	$\{0,1\}$
Control outcome mean	3.30	0.42	5.92	0.49
Control outcome std. dev.	1.18	0.49	4.42	0.50
Observations	1,213	1,213	1,187	1,134
$R^2$	0.603	0.576	0.730	0.400
Panel D: Chile				
Any vaccine information	0.177***	0.070***	0.392***	0.068**
	(0.060)	(0.024)	(0.128)	(0.030)
	(0.000)	(0.024)	(0.120)	(0.000)
Outcome range	[1,5]	$\{0,1\}$	[0,12]	$\{0,1\}$
Control outcome mean	2.89	0.31	4.80	0.46
Control outcome std. dev.	1.23	0.46	4.39	0.50
Observations	1,114	1,114	1,106	1,080
$R^2$	0.511	0.501	0.810	0.351
Panel E: Colombia				
Any vaccine information	0.187***	0.074***	0.326***	0.067**
ing vaccine information	(0.059)	(0.024)	(0.119)	(0.028)
	()	( = -)	()	(==)
Outcome range	[1,5]	$\{0,1\}$	[0,12]	$\{0,1\}$
Control outcome mean	3.18	0.39	6.08	0.57
Control outcome std. dev.	1.16	0.49	4.18	0.50
Observations	1,131	1,131	1,120	1,085
$R^2$	0.460	0.484	0.819	0.378
Panel F: México				-
Any vaccine information	0.054	0.002	$0.507^{***}$	0.009
	(0.065)	(0.026)	(0.155)	(0.028)
0	11.02	(0.1)	[0,12]	(0.1)
Outcome range	[1,5]	$\{0,1\}$	[0,12]	{0,1}
Control outcome mean	3.49	0.54	6.77	0.69
Control outcome std. dev.	1.21	0.50	4.26	0.46
Observations D <sup>2</sup>	1,102	1,102	1,098	1,075
$R^2$	0.415	0.477	0.717	0.311
Panel G: Perú				
Any vaccine information	0.061	0.004	$0.417^{**}$	0.004
	(0.055)	(0.026)	(0.169)	(0.029)
0	11.22	(0.1)	[0,12]	[0,1]
Outcome range	[1,5]	$\{0,1\}$	[0,12]	{0,1}
Control outcome mean	3.14	0.39	5.99	0.57
Control outcome std. dev.	1.04	0.49	4.31	0.49
Observations R <sup>2</sup>	1,231	1,231	1,215	1,176
	0.404	0.411	0.702	0.296

Table S5: Effect of any vaccine information on vaccine willingness. All specifications include country  $\times$  block fixed effects and (standardized) pre-treatment wait until vaccination as covariates (omitted to save space), weight observations by the inverse probability of treatment assignment, and are estimated using OLS. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

		Outco	<b>me variable:</b> Months would	
	Vaccine willingness scale (1)	Willing to take a vaccine (2)	wait to get vaccinated (reversed) (3)	Encourage others to get vaccinated (4)
Vaccine	0.148***	0.045***	0.346***	0.047***
	(0.032)	(0.013)	(0.083)	(0.016)
Vaccine + Biden	0.121***	0.039***	$0.377^{***}$	0.018
	(0.037)	(0.015)	(0.095)	(0.018)
Vaccine + Herd 60%	$0.092^{**}$	$0.036^{*}$	$0.410^{***}$	0.029
	(0.046)	(0.019)	(0.121)	(0.022)
Vaccine + Herd 70%	$0.187^{***}$	$0.051^{***}$	$0.531^{***}$	$0.042^{*}$
	(0.047)	(0.020)	(0.120)	(0.022)
Vaccine + Herd 80%	0.131***	0.043**	$0.347^{***}$	0.011
	(0.045)	(0.019)	(0.126)	(0.022)
Vaccine + Herd 60% + Current	$0.183^{***}$	$0.081^{***}$	$0.520^{***}$	$0.079^{***}$
	(0.046)	(0.020)	(0.126)	(0.022)
Vaccine + Herd 70% + Current	0.183***	$0.067^{***}$	0.408***	$0.064^{***}$
	(0.046)	(0.020)	(0.119)	(0.022)
Vaccine + Herd 80% + Current	$0.102^{**}$	0.010	$0.510^{***}$	0.010
	(0.049)	(0.020)	(0.131)	(0.022)
Outcome range	[1,5]	{0,1}	[0,12]	$\{0,1\}$
Control outcome mean	3.17	0.40	5.78	0.54
Control outcome std. dev.	1.18	0.49	4.38	0.50
Observations	6,951	6,951	6,876	6,659
$R^2$	0.433	0.442	0.716	0.339

Table S6: Effect of different types of vaccine information on vaccine willingness. All specifications include country × block fixed effects and (standardized) pre-treatment wait until vaccination as covariates (omitted to save space), weight observations by the inverse probability of treatment assignment, and are estimated using OLS. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

		Outcon	<b>ne variable:</b> Months would	
	Vaccine	Willing	wait to get	Encourage
	willingness	to take a	vaccinated	others to get
	scale	vaccine	(reversed)	vaccinated
	(1)	(2)	(3)	(4)
Current	$0.140^{**}$	$0.079^{***}$	0.105	$0.076^{***}$
	(0.064)	(0.027)	(0.166)	(0.029)
Current rate below herd opinion	0.088 (0.057)	(0.027) (0.023)	(0.146) (0.146)	(0.023) (0.024) (0.027)
Current $\times$ Current rate below herd opinion	(0.083) (0.083)	(0.010) $-0.104^{***}$ (0.034)	(0.214) (0.214)	(0.021) $-0.084^{**}$ (0.037)
Outcome range	[1,5]	$\{0,1\}$	[0,12]	$\{0,1\}$
Control outcome mean	3.30	0.45	6.04	0.53
Control outcome std. dev.	1.20	0.50	4.49	0.50
Observations	2,955	2,955	2,919	2,821
$R^2$	0.441	0.444	0.712	0.364

Table S7: The effect of being informed that the current rate of vaccination willingness in the population is above/below the rate required for herd immunity. All specifications include country × block fixed effects and (standardized) pre-treatment wait until vaccination as covariates (omitted to save space) and are estimated using OLS. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

			ne variable:	
			Months would	
	Vaccine	Willing	wait to get	Encourage
	willingness scale	to take a vaccine	vaccinated (reversed)	others to g
	(1)	(2)	(16verseu) (3)	(4)
Panel A: All countries po		. /		
Altruism	0.022	0.014	0.074	0.018
	(0.030)	(0.013)	(0.080)	(0.014)
Economic recovery	$(0.051^{*})$ (0.030)	$0.021^{*}$ (0.013)	-0.011 (0.080) 0.252***	0.030** (0.014)
Social approval	0.105***	0.046***	0.252***	0.042***
ootaa approva	(0.030)	(0.013)	(0.084)	(0.014)
Outcome range	[1,5]	{0,1}	[0,12]	{0,1}
Control outcome mean Control outcome std. dev.	3.24 1.17	0.42 0.49	6.07 4.41	0.55
Observations	6.951	6.951	6,876	6,659
$R^2$	0.442	0.456	0.728	0.337
Panel B: Argentina				
Altruism	0.004	-0.016	0.251	0.017
	(0.073)	(0.031)	(0.185)	(0.036)
Economic recovery	$0.115^{*}$ (0.069)	0.034 (0.031)	0.004 (0.180)	0.005 (0.035)
Social approval	0.076	0.031)	0.244	0.013
	(0.076)	(0.033)	(0.178)	(0.037)
Outcome range	[1,5]	{0,1}	[0,12]	{0,1}
Control outcome mean	3.14 1.11	0.40 0.49	5.76 4.40	0.52
Control outcome std. dev. Observations	1,110	0.49	4.40	1,109
R <sup>2</sup>	0.417	0.441	0.773	0.330
Panel C: Brazil				
Altruism	-0.052	-0.004	0.112	-0.017
	(0.063)	(0.027)	(0.214)	(0.033)
Economic recovery	0.024	0.019	0.435**	0.035
Social approval	(0.063) 0.110*	(0.028) 0.051*	(0.196) 0.633***	(0.033) 0.028
sociai approvai	(0.060)	(0.031)	(0.208)	(0.028
	(0.000)	(0.021)	(0.200)	(0.004)
Outcome range	[1,5]	$\{0,1\}$	[0,12]	$\{0,1\}$
Control outcome mean	3.41	0.46	5.97	0.49
Control outcome std. dev.	1.19	0.50	4.45	0.50
Observations R <sup>2</sup>	1,213 0.580	1,213 0.546	1,187 0.683	1,134 0.387
Panel D: Chile	0.000	0.040	0.005	0.001
Altruism	0.164**	0.086***	0.061	0.042
	(0.080)	(0.030)	(0.172)	(0.036)
Economic recovery	$0.145^{*}$	$0.072^{**}$	0.153	0.069*
	(0.079)	(0.030)	(0.191)	(0.035)
Social approval	0.263*** (0.079)	0.126*** (0.030)	0.408** (0.197)	0.076** (0.036)
	(0.079)	(0.050)	(0.197)	(0.030)
Outcome range	[1,5]	$\{0,1\}$	[0,12]	$\{0,1\}$
Control outcome mean	2.92	0.31	5.17	0.49
Control outcome std. dev.	1.22	0.46	4.53	0.50
Observations R <sup>2</sup>	1,114 0.463	1,114 0.472	1,106 0.760	1,080 0.330
Panel E: Colombia	0.405	0.472	0.100	0.550
Panel E: Colombia Altruism	0.035	0.032	0.666***	0.077**
	(0.078)	(0.032)	(0.167)	(0.034)
Economic recovery	0.017	0.012	0.138	0.042
	(0.076)	(0.032)	(0.172)	(0.034)
Social approval	0.117 (0.075)	(0.045) (0.031)	(0.256) (0.179)	0.087 <sup>**</sup> (0.035)
	(0.075)	(0.031)	(0.179)	(0.055)
Outcome range	[1,5]	$\{0,1\}$	[0,12]	$\{0,1\}$
Control outcome mean	3.26	0.41	5.96	0.57
Control outcome std. dev.	1.16	0.49	4.47	0.50
Observations R <sup>2</sup>	1,131 0.424	1,131 0.449	1,120 0.784	1,085 0.343
	0.424	0.449	0.104	0.545
Panel F: México Altruism	-0.007	-0.001	-0.121	0.045
	(0.082)	(0.033)	(0.212)	(0.045)
Economic recovery	-0.004	-0.002	-0.245	0.045
	(0.090)	(0.034)	(0.225)	(0.035)
Social approval	0.035	0.006 (0.033)	-0.015	0.047
	(0.083)	(0.033)	(0.226)	(0.036)
Outcome range	[1,5]	$\{0,1\}$	[0,12]	$\{0,1\}$
Control outcome mean	3.54	0.55	7.23	0.66
Control outcome std. dev.	1.16	0.50	4.02	0.48
Observations R <sup>2</sup>	1,102	1,102	1,098	1,075
	0.349	0.422	0.673	0.293
Panel G: Perú Altruism	-0.001	-0.006	$-0.486^{**}$	-0.050
	(0.071)	(0.033)	(0.214)	(0.035)
Economic recovery	0.023	-0.004	$-0.494^{**}$	-0.012
	(0.069)	(0.032)	(0.199)	(0.036)
Social approval	0.043	0.014	0.006	0.009
	(0.072)	(0.033)	(0.227)	(0.035)
Outcome range	[1,5]	$\{0,1\}$	[0,12]	{0,1}
Control outcome mean	3.16	0.39	6.35	0.58
Control outcome std. dev.	1.08	0.49	4.34	0.49
	1 221	1,231	1,215	1,176
Observations R <sup>2</sup>	1,231 0.360	0.369	0.679	0.291

Table S8: Effect of different types of motivational message on vaccine willingness. All specifications include country × block fixed effects and (standardized) pre-treatment wait until vaccination as covariates (omitted to save space) and are estimated using OLS. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

between treatment groups and the control group by using our main regression specifications to examine whether treatments differentially affected the probability of answering post-treatment outcome questions.

Table S9 reports the results for receiving any vaccine information. Panel A pools across countries and indicates that respondents that received any vaccine information were around 2 percentage points less likely to answer our main outcome questions. Panels B-G indicate that this difference is driven primarily by respondents in Colombia and Perú. Within the pooled sample, the difference in answering our three main outcome questions between treated and control respondents is statistically significant in each case, although the difference is relatively small in magnitude. Among the treated respondents, we find no evidence of differential attrition between treatment arms: for each of our three main outcomes, we fail to reject the null hypothesis that the response rate is identical across the eight different treatment groups (p = 0.47, p = 0.40, and p = 0.64, respectively).

We next turn to attrition for the motivational message treatments reported in Table S10. Focusing again on the estimates that pool across countries in panel A, we observe more substantial differences in attrition between the message and control groups: for each message, the probability of answering the post-treatment questions is around 5 percentage points higher. Again, we fail to reject the null hypothesis that there is no difference in attrition between each type of message treatment (p = 0.42).

These differences raise the concern that the estimates could be biased if certain types of respondent are more likely to attrite when they receive certain treatment conditions. To gauge whether such differential attrition is likely to bias our estimates, we first examine balance across pre-treatment covariates before and after respondents had the opportunity to attrite. Column (1) of Tables S11 and S12 examines balance at the point of assignment—before attrition could kick in. Consistent with the integrity of the randomized assignment of treatment, differences be-

	0	utcome varia	ble:
	Answered	Answered	Answered
	vaccine	wait	encourage
	willingness	until	others to get
	scale	vaccination	vaccinated
	(1)	(2)	(3)
Panel A: All countries po			
Any vaccine information	$-0.017^{***}$	$-0.017^{***}$	$-0.023^{***}$
	(0.003)	(0.004)	(0.006)
Outcome range	{0,1}	$\{0,1\}$	$\{0,1\}$
Control outcome mean	0.99	0.98	0.95
Control outcome std. dev.	0.10	0.15	0.21
Observations	7,125	7,125	7,125
$R^2$	0.032	0.040	0.046
Panel B: Argentina			
Any vaccine information	-0.002	-0.003	-0.017
	(0.010)	(0.012)	(0.016)
Outcome range	{0,1}	$\{0,1\}$	{0,1}
Control outcome mean	0.98	0.97	0.95
Control outcome std. dev.	0.98	0.16	0.22
Observations	1,184	1,184	1,184
$R^2$	0.025	0.021	0.029
Panel C: Brazil			
Any vaccine information	$-0.023^{***}$	-0.012	-0.011
,	(0.008)	(0.014)	(0.019)
	,	· · /	,
Outcome range	$\{0,1\}$	$\{0,1\}$	$\{0,1\}$
Control outcome mean	0.99	0.96	0.92
Control outcome std. dev.	0.10	0.20	0.28
Observations	1,248	1,248	1,248
$R^2$	0.033	0.042	0.040
Panel D: Chile			
Any vaccine information	$-0.019^{**}$	-0.013	-0.015
	(0.010)	(0.012)	(0.016)
Outcome range	{0,1}	$\{0,1\}$	$\{0,1\}$
Control outcome mean	0.98	0.97	0.95
Control outcome std. dev.	0.13	0.17	0.22
Observations	1,149	1,149	1,149
$R^2$	0.031	0.048	0.036
Panel E: Colombia			
Any vaccine information	$-0.019^{***}$	$-0.026^{***}$	$-0.033^{**}$
	(0.007)	(0.009)	(0.014)
Outcome range	(0.1)	<i>(</i> 0.1)	(0.1)
Outcome range Control outcome mean	$\{0,1\}$ 1.00	$\{0,1\}$ 0.99	{0,1} 0.97
Control outcome std. dev.	0.06	0.99	0.97
Observations	1,154	1,154	1,154
$R^2$	0.030	0.029	0.041
Panel F: México			
Any vaccine information	-0.008	$-0.013^{**}$	-0.017
	(0.006)	(0.007)	(0.011)
Outcome range	{0,1}	$\{0,1\}$	{0,1}
Control outcome mean	0.99	0.99	0.98
Control outcome std. dev.	0.09	0.09	0.16
Observations	1,119	1,119	1,119
$R^2$	0.053	0.047	0.055
Panel G: Perú			
	$-0.030^{***}$	$-0.032^{***}$	$-0.044^{***}$
Any vaccine information			(0.014)
Any vaccine information	(0.008)	(0.011)	(0.014)
Outcome range	{0,1}	{0,1}	$\{0,1\}$
Outcome range Control outcome mean	$\{0,1\}$ 0.99	$\{0,1\}$ 0.98	$\{0,1\}$ 0.96
Any vaccine information Outcome range Control outcome mean Control outcome std. dev. Observations	{0,1}	{0,1}	$\{0,1\}$

Table S9: Effect of receiving any vaccination information on responding to main posttreatment outcome questions. All specifications include country × block fixed effects and (standardized) pre-treatment wait until vaccination as covariates (omitted to save space), weight observations by the inverse probability of treatment assignment, and are estimated using OLS. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

	0	utcome varia	ble:
	Answered	Answered	Answered
	vaccine	wait	encourage
	willingness	until	others to ge
	scale (1)	vaccination (2)	vaccinated (3)
Panel A: All countries po		(2)	(5)
Altruism	0.050***	0.052***	0.052***
	(0.006)	(0.007)	(0.009)
Economic recovery	0.045***	$0.046^{***}$	0.047***
	(0.006)	(0.007)	(0.009)
Social approval	0.049***	0.052***	0.052***
	(0.006)	(0.007)	(0.009)
Outcome range	$\{0,1\}$	$\{0,1\}$	$\{0,1\}$
Control outcome mean	0.94	0.93	0.90
Control outcome std. dev.	0.24	0.26	0.30
Observations	7,125	7,125	7,125
$R^2$	0.046	0.043	0.039
Panel B: Argentina	0.041***	0.049**	0.044**
Altruism	0.041***	$0.043^{**}$ (0.017)	0.044**
Economic recovery	(0.015) 0.044***	0.053***	(0.022) $0.041^*$
Economic recovery	(0.014)	(0.016)	(0.023)
Social approval	0.052***	0.058***	0.066***
	(0.014)	(0.016)	(0.021)
	(0.1)	(0,1)	(0.12)
Outcome range Control outcome mean	{0,1} 0.95	{0,1} 0.93	{0,1} 0.90
Control outcome mean Control outcome std. dev.	0.95	0.93	0.90
Observations	1,184	1,184	1,184
R <sup>2</sup>	0.043	0.037	0.039
Panel C: Brazil			
Altruism	0.048***	0.039**	0.023
	(0.015)	(0.018)	(0.024)
Economic recovery	0.036**	0.017	0.022
	(0.016)	(0.020)	(0.024)
Social approval	0.048*** (0.015)	0.044** (0.018)	0.032 (0.023)
	(0.015)	(0.018)	(0.023)
Outcome range	$\{0,1\}$	$\{0,1\}$	$\{0,1\}$
Control outcome mean	0.94	0.93	0.89
Control outcome std. dev.	0.24	0.26	0.32
Observations	1,248	1,248	1,248
$R^2$	0.038	0.034	0.024
Panel D: Chile			
Altruism	$0.056^{***}$	0.062***	$0.057^{***}$
	(0.016)	(0.017)	(0.020)
Economic recovery	0.058***	0.053***	0.044**
	(0.016)	(0.018)	(0.021)
Social approval	0.044**	0.054***	0.048**
	(0.017)	(0.018)	(0.021)
Outcome range	$\{0,1\}$	$\{0,1\}$	$\{0,1\}$
Control outcome mean	0.93	0.92	0.90
Control outcome std. dev.	0.26	0.27	0.30
Observations	1,149	1,149	1,149
$R^2$	0.046	0.050	0.031
Panel E: Colombia			
Altruism	0.048***	0.067***	0.069***
P	(0.013)	(0.016)	(0.021)
Economic recovery	0.038***	0.056***	0.057***
Social approval	(0.014) $0.044^{***}$	(0.017) 0.055***	(0.022) 0.060***
Social approval	(0.014)	(0.055)	(0.022)
	(0.0**)	(	(
Outcome range	$\{0,1\}$	$\{0,1\}$	$\{0,1\}$
Control outcome mean	0.95	0.93	0.89
Control outcome std. dev.	0.23	0.26	0.31
Observations D <sup>2</sup>	1,154	1,154	1,154
R <sup>2</sup>	0.050	0.050	0.035
Panel F: México	0.040	0.0/2***	0.05
Altruism	0.040***	$0.043^{***}$ (0.013)	0.057*** (0.017)
Economic recovery	(0.013) 0.038***	0.034**	0.050***
	(0.013)	(0.015)	(0.018)
Social approval	$0.041^{***}$	0.040***	0.038**
	(0.013)	(0.014)	(0.019)
Outcome rong	(0.1)	(0.1)	(6.1)
Outcome range Control outcome mean	{0,1} 0.95	{0,1} 0.95	{0,1} 0.92
Control outcome mean	0.95	0.95	0.92
Observations	1,119	1,119	1,119
R <sup>2</sup>	0.058	0.050	0.062
Panel G: Perú			
Altruism	0.063***	0.056***	0.064***
	(0.016)	(0.019)	(0.022)
Economic recovery	0.055***	0.061***	0.068***
	(0.016)	(0.018)	(0.022)
Social approval	0.061***	0.061***	0.069***
	(0.017)	(0.019)	(0.023)
Outcome range	{0,1}	(0.1)	$\{0,1\}$
	{0,1} 0.92	{0,1} 0.91	{0,1} 0.88
	0.94	0.91	
	0.26	0.28	0.33
Control outcome mean Control outcome std. dev. Observations	0.26	0.28	0.33

Table S10: Effect of motivational messages on responding to main post-treatment outcome questions. All specifications include country  $\times$  block fixed effects and (standardized) pre-treatment wait until vaccination as covariates (omitted to save space) and are estimated using OLS. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

tween treatment and control groups are consistent with chance: of 81 pre-treatment covariates, we reject at the 10% level the null hypothesis that the mean in each experimental (treatment or control) group is equal in only 4 cases for the vaccine information treatments and in 14 cases for the motivation treatments. Columns (2)-(4) next examine how differences in pre-treatment covariates change once attrition by the time that different outcome variables are reached is accounted for. If differences in attrition across experimental groups break the randomization because attrition did not occur at random within groups, we should expect differences to emerge at this point. However, the results indicate that significant imbalances do not arise due to attrition: we again observe only 4 instances where we can reject the null hypothesis of equality across experimental groups in the case of the vaccine information treatments; while there is some variation across outcome variables for the motivational messages, the overall number of imbalances is again similar in the datasets with and without attrition. In sum, this evidence suggests that the individuals that differentially attrited in certain experimental groups are not systematically different from those that did not.

Nevertheless, it remains possible that the respondents that attrited upon receiving a specific treatment condition could differ in terms of unobserved characteristics that might influence potential outcomes. To address this concerns, our second approach uses the non-parametric bounding approach proposed Lee (48) to examine how our estimates change in the case of severe forms of selection into responding to post-treatment questions. When attrition is greater in the treatment group than the comparison group, the upper (lower) bound on the treatment effect is obtained by trimming the most extreme values from the lower (upper) tail of the outcome distribution in the treatment group until the groups are of equal size (adjusting for probability of treatment assignment); the reverse holds when attrition is greater in the comparison group. This procedure, which does not rely on statistical assumptions, allows the researcher to compute a 95% confidence interval for the treatment effect that captures both uncertainty due to random

	Sa	mple for whice Answered	h balance is t Answered	
		Answered vaccine	Answered wait	Answered encourage
	Received	willingness	until	others to get
Pre-treatment covariate	treatment (1)	scale (2)	vaccination (3)	vaccinated (4)
Education - None	0.603	0.529	0.649	0.662
Education - Primary	0.683	0.783	0.754	0.77
Education - Secondary	0.366	0.387	0.515	0.543
Education - Other Higher	0.378	0.33	0.416	0.397
Education - University	0.124	0.21	0.239	0.272
Gender	0.386	0.42	0.358	0.437
Running Water in Home	0.72 0.544	0.837	0.923	0.839 0.631
Sewage in Home Electricity in Home	0.344	0.307	0.303	0.031
No Running Water, Sewage, or Electricity in Home	0.202	0.201	0.339	0.345
COVID News Consumption - TV	0.462	0.357	0.409	0.35
COVID News Consumption - Radio	0.736	0.683	0.733	0.532
COVID News Consumption - Print	0.529	0.493	0.556	0.691
COVID News Consumption - Word of Mouth	0.942	0.912	0.905	0.885
COVID News Consumption - WhatsApp	0.525	0.761	0.771	0.762
COVID News Consumption - Social Media	0.812	0.829	0.806	0.846
COVID News Consumption - News Websites	0.627	0.494	0.437	0.284
COVID Severity in Country Herd Immunity Prior	0.468	0.533	0.599	0.601 0.291
	0.237	0.289	0.275	0.291
General Vaccine Hesitancy - Protect from Disease General Vaccine Hesitancy - Good for Community	0.704	0.808	0.85	0.814
General Vaccine Hesitancy - Trust in Government	0.143	0.998	0.313	0.339
General Vaccine Hesitancy - Follow Doctor Instructions	0.725	0.713	0.665	0.593
General Vaccine Hesitancy - Trust in International Medical Experts	0.793	0.738	0.744	0.6
General Vaccine Hesitancy - Refused Vaccine	0.567	0.529	0.542	0.622
COVID Hesitancy Reasons - Side Effects	0.421	0.276	0.275	0.207
COVID Hesitancy Reasons - Vaccine Gives COVID	0.223	0.224	0.311	0.344
COVID Hesitancy Reasons - Produced Too Quickly	0.366	0.256	0.213	0.23
COVID Hesitancy Reasons - Not Effective	0.334 0.362	0.261 0.429	0.201	0.182 0.268
COVID Hesitancy Reasons - Not At Risk of Getting COVID COVID Hesitancy Reasons - Against Vaccines Generally	0.362	0.429	0.343	0.268
COVID Hesitancy Reasons - Against vaccines Generally COVID Hesitancy Reasons - Prefer 'Natural' Immunity	0.780	0.855	0.305	0.9
COVID Hesitancy Reasons - Freier Natural Hinnunity COVID Hesitancy Reasons - Already Had COVID	0.568	0.243	0.633	0.597
COVID Hesitancy Reasons - Don't Trust Government	0.106	0.137	0.118	0.199
COVID Hesitancy Reasons - Financial Concerns	0.484	0.528	0.587	0.658
COVID Hesitancy Reasons - Other	0.594	0.602	0.642	0.517
Comorbidities - None	0.47	0.453	0.413	0.443
Comorbidities - Diabetes	0.265	0.233	0.318	0.298
Comorbidities - Cardiovascular Diseases	0.47	0.374	0.385	0.449
Comorbidities - Obesity	0.691	0.717	0.584	0.72
Comorbidities - Autoimmune Diseases	0.795	0.779	0.8	0.803
Comorbidities - Chronic Obstructive Pulmonary Disease Comorbidities - Prefer Not To Share	0.128 0.48	0.186	0.197	0.22 0.705
Had COVID	0.952	0.987	0.976	0.979
Know Someone Seriously Ill or Passed Away COVID	0.325	0.342	0.414	0.567
COVID Economic Situation	0.337	0.425	0.446	0.228
Government Vaccine Priority	0.791	0.793	0.834	0.824
Left/Right Political Scale	0.262	0.188	0.145	0.102
Satisfied with President COVID Management	0.305	0.334	0.466	0.546
Satisfied with Mayor COVID Management	0.017**	0.022**	0.014**	0.011**
Satisfied with Health Ministry COVID Management	0.432 0.416	0.515 0.325	0.569 0.331	0.664 0.297
Would Vote for Current President Would Vote for Current Mayor	0.416	0.325	0.581	0.297
Trust in Current President	0.332	0.697	0.534	0.538
Trust in Current Mayor	0.332	0.439	0.083*	0.0339
Trust in National Health Ministry	0.492	0.603	0.63	0.763
Trust in National Medical Association	0.95	0.931	0.902	0.94
Trust in Left-Wing Newspaper	0.661	0.697	0.69	0.75
Trust in Right-Wing Newspaper	0.66	0.814	0.793	0.827
Trust in Religious Leader	0.718	0.763	0.738	0.696
Trust in Local Healthcare	0.578	0.459	0.503	0.649
Trust in Armed Forces	0.423	0.439	0.476	0.578
Trust in Civil Society Organizations Trust in Government of China	0.77	0.8 0.433	0.739 0.478	0.72 0.502
Trust in Government of U.S. Under Trump	0.331	0.433	0.478	0.032**
Trust in Government of U.S. Under Trump	0.031**	0.024***	0.0300	0.327
Trust in Government of U.K.	0.418	0.394	0.405	0.59
Trust in Government of Russia	0.242	0.26	0.232	0.231
Meeting Indoor With Non-Family Contributes to COVID	0.165	0.221	0.257	0.297
Risk Aversion 1	0.373	0.458	0.419	0.37
Risk Aversion 2	0.09*	0.159	0.179	0.116
	0.459	0.631	0.662	0.625
Risk Aversion 3			0.52	0.345
Risk Aversion 4	0.479	0.6		
Risk Aversion 4 Risk Aversion 5	0.873	0.894	0.897	0.855
Risk Aversion 4 Risk Aversion 5 Discount Rate 1	0.873 0.925	0.894 0.941	0.897 0.958	0.975
Risk Aversion 4 Risk Aversion 5 Discount Rate 1 Discount Rate 2	0.873 0.925 0.842	0.894 0.941 0.892	0.897 0.958 0.848	0.975 0.848
Risk Aversion 4 Risk Aversion 5 Discount Rate 1 Discount Rate 2 Discount Rate 3	0.873 0.925	0.894 0.941	0.897 0.958	0.975
Risk Aversion 4 Risk Aversion 5 Discount Rate 1 Discount Rate 2 Discount Rate 3 Discount Rate 4	0.873 0.925 0.842 0.737	0.894 0.941 0.892 0.79	0.897 0.958 0.848 0.799	0.975 0.848 0.878
Risk Aversion 4 Risk Aversion 5 Discount Rate 1 Discount Rate 2 Discount Rate 3	0.873 0.925 0.842 0.737 0.411	0.894 0.941 0.892 0.79 0.497	0.897 0.958 0.848 0.799 0.524	0.975 0.848 0.878 0.588

Table S11: Balance of vaccine information treatments over pre-treatment covariates. Each number is the p value associated with the test of the null hypothesis that no treatment condition differs from the control group in terms of a given pre-treatment covariate. All specifications include country × block fixed effects and (standardized) pre-treatment wait until vaccination as covariates (omitted to save space), weight observations by the inverse probability of treatment assignment, and are estimated using OLS. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

	Sa	h balance is t			
	Answered Answered Answered				
		vaccine	wait	encourage	
	Received	willingness	until	others to ge	
Pre-treatment covariate	treatment (1)	scale (2)	vaccination (3)	vaccinated (4)	
Education - None	0.799	0.458	0.455	0.467	
Education - Primary	0.159	0.174	0.201	0.17	
Education - Secondary	0.636	0.664	0.695	0.873	
Education - Other Higher	0.828	0.856	0.823	0.961	
Education - University	0.306	0.32	0.35	0.369	
Gender	0.521	0.437	0.492	0.375	
Running Water in Home	0.182	0.201	0.209	0.249	
Sewage in Home	0.825	0.851	0.816	0.757	
Electricity in Home	0.986	0.981	0.983	0.942	
No Running Water, Sewage, or Electricity in Home	0.205	0.173	0.222	0.253	
COVID News Consumption - TV	0.734	0.741	0.829	0.892	
COVID News Consumption - Radio	0.484	0.486	0.487	0.52	
COVID News Consumption - Print	0.946	0.908	0.893	0.89	
COVID News Consumption - Word of Mouth	0.474	0.413	0.382	0.5	
COVID News Consumption - WhatsApp	0.937	0.938	0.91	0.693	
COVID News Consumption - Social Media	0.834	0.807	0.819	0.86	
COVID News Consumption - News Websites	0.728	0.692	0.705	0.609	
COVID Severity in Country	0.241	0.19	0.216	0.205	
Herd Immunity Prior	0.211	0.308	0.387	0.205	
General Vaccine Hesitancy - Protect from Disease	0.601	0.508	0.657	0.275	
	0.601	0.657	0.657	0.612	
General Vaccine Hesitancy - Good for Community					
General Vaccine Hesitancy - Trust in Government	0.385 0.59	0.462 0.605	0.399 0.605	0.516 0.64	
General Vaccine Hesitancy - Follow Doctor Instructions	0.59	0.605	0.605	0.64	
General Vaccine Hesitancy - Trust in International Medical Experts					
General Vaccine Hesitancy - Refused Vaccine	0.988	0.965	0.978	0.932	
COVID Hesitancy Reasons - Side Effects	0.99	0.98	0.98	0.955	
COVID Hesitancy Reasons - Vaccine Gives COVID	0.003***	$0.002^{***}$	0.003***	0.006***	
COVID Hesitancy Reasons - Produced Too Quickly	0.153	0.117	0.09*	0.119	
COVID Hesitancy Reasons - Not Effective	0.154	0.181	0.21	0.33	
COVID Hesitancy Reasons - Not At Risk of Getting COVID	0.575	0.643	0.601	0.586	
COVID Hesitancy Reasons - Against Vaccines Generally	0.867	0.858	0.935	0.842	
COVID Hesitancy Reasons - Prefer 'Natural' Immunity	0.895	0.875	0.9	0.868	
COVID Hesitancy Reasons - Already Had COVID	0.767	0.846	0.839	0.835	
COVID Hesitancy Reasons - Don't Trust Government	0.248	0.556	0.549	0.568	
COVID Hesitancy Reasons - Financial Concerns	0.245	0.322	0.324	0.349	
COVID Hesitancy Reasons - Other	0.525	0.563	0.514	0.35	
Comorbidities - None	0.033**	0.027**	0.029**	0.035**	
Comorbidities - Diabetes	0.633	0.546	0.609	0.618	
Comorbidities - Cardiovascular Diseases	0.879	0.717	0.647	0.506	
Comorbidities - Obesity	0.239	0.264	0.231	0.324	
Comorbidities - Autoimmune Diseases	0.898	0.852	0.859	0.93	
Comorbidities - Chronic Obstructive Pulmonary Disease	0.572	0.536	0.537	0.761	
Comorbidities - Prefer Not To Share	0.036**	0.059*	0.054*	0.03**	
Had COVID	0.567	0.575	0.645	0.682	
Know Someone Seriously III or Passed Away COVID	0.132	0.119	0.119	0.159	
COVID Economic Situation	0.102	0.171	0.204	0.241	
Government Vaccine Priority	0.109	0.082*	0.204	0.241	
	0.798	0.818	0.793	0.791	
Left/Right Political Scale Satisfied with President COVID Management	0.798	0.818	0.795	0.338	
Sanshed with President COVID Management	0.291	0.239	0.269	0.338	
Satisfied with Mayor COVID Management					
Satisfied with Health Ministry COVID Management	0.875	0.841	0.829	0.836	
Would Vote for Current President	0.011**	0.013**	0.009***	0.014**	
Would Vote for Current Mayor	0.542	0.573	0.696	0.603	
Trust in Current President	0.681	0.706	0.701	0.737	
Trust in Current Mayor	0.621	0.709	0.737	0.669	
Trust in National Health Ministry	0.885	0.849	0.886	0.831	
Trust in National Medical Association	0.07*	0.11	0.171	0.213	
Trust in Left-Wing Newspaper	0.546	0.53	0.507	0.777	
Trust in Right-Wing Newspaper	0.089*	0.106	0.099*	0.134	
Trust in Religious Leader	0.832	0.818	0.8	0.751	
Trust in Local Healthcare	0.028**	0.038**	0.058*	0.071*	
Trust in Armed Forces	0.208	0.181	0.177	0.363	
Trust in Civil Society Organizations	0.069*	0.09*	0.099*	0.141	
Trust in Government of China	0.133	0.082*	0.057*	0.191	
Trust in Government of U.S. Under Trump	0.579	0.578	0.555	0.742	
Trust in Government of U.S. Under Biden	0.026**	0.005***	0.007***	0.018**	
Trust in Government of U.K.	0.458	0.437	0.434	0.664	
Trust in Government of Russia	0.642	0.884	0.879	0.791	
	0.449	0.433	0.437	0.337	
Meeting Indoor With Non-Family Contributes to COVID	0.413	0.341	0.285	0.226	
Meeting Indoor With Non-Family Contributes to COVID Risk Aversion 1		0.785	0.808	0.784	
Risk Aversion 1	0.676			0.644	
	0.676	0.785	0.566		
Risk Aversion 1 Risk Aversion 2 Risk Aversion 3	0.354	0.535			
Risk Aversion 1 Risk Aversion 2 Risk Aversion 3 Risk Aversion 4	0.354 0.75	0.535 0.922	0.92	0.989	
Risk Aversion 1 Risk Aversion 2 Risk Aversion 3 Risk Aversion 4 Risk Aversion 5	0.354 0.75 0.148	0.535 0.922 0.441	0.92 0.525	0.989 0.516	
Risk Aversion 1 Risk Aversion 2 Risk Aversion 3 Risk Aversion 4 Risk Aversion 5 Discount Rate 1	0.354 0.75 0.148 0.058*	0.535 0.922 0.441 0.04**	0.92 0.525 0.049**	0.989 0.516 0.065*	
Risk Aversion 1 Risk Aversion 2 Risk Aversion 3 Risk Aversion 4 Risk Aversion 5 Discount Rate 1 Discount Rate 2	0.354 0.75 0.148 0.058* 0.011**	0.535 0.922 0.441 0.04** 0.013**	0.92 0.525 0.049** 0.022**	0.989 0.516 0.065* 0.022**	
Risk Aversion 1 Risk Aversion 2 Risk Aversion 3 Risk Aversion 5 Discount Rate 1 Discount Rate 2 Discount Rate 3	0.354 0.75 0.148 0.058* 0.011** 0.006***	0.535 0.922 0.441 0.04** 0.013** 0.015**	0.92 0.525 0.049** 0.022** 0.022**	0.989 0.516 0.065* 0.022** 0.032**	
Risk Aversion 1 Risk Aversion 2 Risk Aversion 3 Risk Aversion 4 Risk Aversion 5 Discount Rate 1 Discount Rate 2 Discount Rate 4	0.354 0.75 0.148 0.058* 0.011** 0.006*** 0.021**	0.535 0.922 0.441 0.04** 0.013** 0.015** 0.065*	0.92 0.525 0.049** 0.022** 0.022** 0.087*	0.989 0.516 0.065* 0.022** 0.032** 0.106	
Risk Aversion 1 Risk Aversion 2 Risk Aversion 3 Risk Aversion 5 Discount Rate 1 Discount Rate 2 Discount Rate 3	0.354 0.75 0.148 0.058* 0.011** 0.006***	0.535 0.922 0.441 0.04** 0.013** 0.015**	0.92 0.525 0.049** 0.022** 0.022**	0.989 0.516 0.065* 0.022** 0.032**	

Table S12: Balance of motivational messages over pre-treatment covariates. Each number is the p value associated with the test of the null hypothesis that no treatment condition differs from the control group in terms of a given pre-treatment covariate. All specifications include country × block fixed effects and (standardized) pre-treatment wait until vaccination as covariates (omitted to save space) and are estimated using OLS. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

assignment as well as uncertainty due to the potential selection bias induced by attrition. To implement this bounding approach, we focus on unadjusted comparisons between treatment and control groups (with inverse probability of treatment assignment weights), which exclude the fixed effects used to increase the precision of our estimates because analytic standard errors could not be obtained. Due to our randomization, the exclusion of such fixed effects does not induce bias.

Tables S13 and S14 report the 95% confidence intervals for the bounds on the effects of any vaccine treatment and the different motivational treatments in the sample that pools across countries. We do not report results for differences between information treatments (i.e. the results corresponding to Tables S6 and S7) because there is no evidence of differential between information treatments (see above). Given the limited levels of differential attrition, the confidence interval for receiving any vaccine information unsurprisingly show that the Lee bounds are relatively tight: for each estimate, the 95% confidence interval is only slightly larger than for our main estimates, and the lower bound remains statistically significantly different from zero in each case. Consequently, differences in attrition cannot account for the positive effects of basic vaccine information on vaccine willingness.

Turning to the motivational messages in Table S14, the 95% confidence intervals for the treatment effects of each message are larger due to the greater differences in attrition between the control and message groups. Panels A-C examine each motivational message separately relative to the control group, given that Lee bounds cannot be computed for multiple treatments simultaneously. The results for the social approval message show that the lower bound includes effects that are statistically indistinguishable from zero, although the upper bound equally includes effects that are much larger than our main estimates suggest. While differential attrition increases uncertainty about the exact effect of the social approval message, there are two important reasons to be confident that social approval produces positive effects on vaccine willingness.

	Outcome variable: Months would				
	Vaccine	Willing	wait to get	Encourage	
	willingness	to take a	vaccinated	others to get	
	scale	vaccine	(reversed)	vaccinated	
	(1)	(2)	(3)	(4)	
Any vaccine information effect 95% confidence interval	[0.051, 0.217]	[0.017, 0.074]	[0.117, 0.686]	[0.003, 0.070]	
Outcome range	[1,5]	{0,1}	[0,12]	{0,1}	
Control outcome mean	3.24	0.42	5.98	0.56	
Control outcome std. dev.	1.18	0.49	4.43	0.50	
Number of selected observations	6,986	6,986	6,910	6,706	
Share of control observations trimmed	0.017	0.017	0.017	0.024	

**Table S13: Lee bounds on the effect of any vaccine information on vaccine willingness.** All 95% confidence intervals for the treatment effect are based on Lee bound estimates, where observations are weighted by the inverse probability of treatment assignment. Confidence intervals are based on robust standard errors.

First, as Table S12 shows, attrition does not induce observable differences between the social approval and control groups. This suggests that attrition plausibly occurs somewhat randomly within treatment groups, implying that it is not the most hesitant respondents that differentially attrited from the control group—the case that corresponds to the lower Lee bound. Second, because there are no differences in attrition between motivational message groups, we can estimate the effect of the the social approval treatment relative to the altruistic treatment, which seems to have had limited impact on respondents. The results in Table S15, which compares these two groups, indicates that the social approval treatment produced a significantly larger effect than the altruistic treatment. This adds further weight to the conclusion that social approval messaging could produce substantial positive effects on vaccine uptake.

	Outcome variable:					
	Vaccine willingness scale (1)	Willing to take a vaccine (2)	Months would wait to get vaccinated (reversed) (3)	Encourage others to get vaccinated (4)		
Panel A: Altruism message						
Altruism effect 95% confidence interval	[-0.146, 0.209]	[-0.047, 0.064]	[-0.596, 0.598]	[-0.042, 0.079]		
Outcome range	[1,5]	$\{0,1\}$	[0,12]	$\{0,1\}$		
Control outcome mean	3.25	0.42	6.07	0.56		
Control outcome std. dev.	1.18	0.49	4.43	0.50		
Number of selected observations	3,471	3,471	3,431	3,321		
Share of control observations trimmed	0.050	0.050	0.053	0.056		
Panel B: Economic recovery message						
Economic recovery effect 95% confidence interval	[-0.107, 0.231]	[-0.037, 0.070]	[-0.606, 0.520]	[-0.027, 0.087]		
Outcome range	[1,5]	$\{0,1\}$	[0,12]	{0,1}		
Control outcome mean	3.26	0.43	6.05	0.56		
Control outcome std. dev.	1.18	0.49	4.45	0.50		
Number of selected observations	3,466	3,466	3,424	3,313		
Share of control observations trimmed	0.047	0.047	0.048	0.051		
Panel C: Social approval message						
Social approval effect 95% confidence interval	[-0.066, 0.283]	[-0.015, 0.095]	[-0.457, 0.753]	[-0.018, 0.102]		
Outcome range	[1,5]	$\{0,1\}$	[0,12]	$\{0,1\}$		
Control outcome mean	3.28	0.44	6.14	0.57		
Control outcome std. dev.	1.16	0.50	4.44	0.50		
Number of selected observations	3,480	3,480	3,443	3,331		
Share of control observations trimmed	0.049	0.049	0.053	0.056		

**Table S14: Lee bounds on the effect of different types of motivational message on vaccine willingness.** All 95% confidence intervals for the treatment effect are based on Lee bound estimates. Confidence intervals are based on robust standard errors.

	Outcome variable: Months would				
	Vaccine willingness scale (1)	Willing to take a vaccine (2)	wait to get vaccinated (reversed) (3)	Encourage others to get vaccinated (4)	
Social approval	0.077**	0.031**	0.188**	0.024*	
	(0.031)	(0.013)	(0.083)	(0.014)	
Outcome range	[1,5]	$\{0,1\}$	[0,12]	{0,1}	
Control outcome mean	3.29	0.45	6.14	0.58	
Control outcome std. dev.	1.17	0.50	4.45	0.49	
Observations	3,485	3,485	3,452	3,346	
$R^2$	0.446	0.466	0.724	0.348	

Table S15: The effect of social approval versus altruistic motivational messages on vaccine willingness. All specifications include country  $\times$  block fixed effects and (standardized) pretreatment wait until vaccination as covariates (omitted to save space) and are estimated using OLS. The baseline category is the altruism message treatment. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

# S8 Differential effects of vaccine information treatments on reasons given for reducing hesitancy

Among the subset of respondents that received an information treatment, we later asked how the treatment affected their reasons for being hesitant. Since this question was only asked of treated respondents, we examine the effect of the more detailed information treatments relative to the effect of the basic vaccine information. The basic vaccine information group means at the foot of Table S16 show that respondents became less hesitant along a number of dimensions, while the treatment effect estimates indicate that no additional information treatment condition systematically affected the reasons that individuals stated for becoming less hesitant. In line with the lack of differential effect of the information treatments on our vaccine willingness outcomes, the results suggest that basic vaccine information was sufficient to significantly reduce vaccine hesitancy and that further information did not make individuals less hesitant.

# **S9** Heterogeneity in the effect of basic vaccine information

To understand which types of individuals may be most responsive to exposure to basic vaccine information, we examine heterogeneity in treatment effects across demographic subgroups about which policymakers can conceivably obtain data at scale—and could thus microtarget campaign messaging towards. Specifically, we consider a respondent's sex, age category, highest level of completed education, socioeconomic class, and intention to vote for the President. Using the specifications described in S3 Appendix, Table S17 shows that the treatments produced similar effects on different types of hesitant respondent. The only systematic difference is that basic vaccine information is slightly more effective at persuading women to vaccinate than men.

	Outcome variable:								
	Less worried about side effects (1)	Less worried about getting COVID-19 from vaccine (2)	Less worried about speed of development (3)	Less worried about vaccine ineffectiveness (4)	No getting vaccinated even if low risk (5)	No longer wants immunity from infection (6)	Now getting vaccinated even if already had COVID-19 (7)	Now more trusting of government (8)	Less worried about cost (9)
Vaccine + Biden	-0.000	0.004	0.018	0.002	0.001	0.003	0.012	-0.004	-0.000
	(0.015)	(0.016)	(0.016)	(0.017)	(0.013)	(0.011)	(0.012)	(0.010)	(0.013)
Vaccine + Herd 60%	0.018	-0.022	-0.024	0.017	0.027	0.017	-0.000	0.001	-0.003
	(0.019)	(0.019)	(0.019)	(0.022)	(0.018)	(0.015)	(0.014)	(0.013)	(0.017)
Vaccine + Herd 70%	0.040**	0.022	-0.001	0.036*	-0.005	0.016	0.009	0.004	-0.020
	(0.020)	(0.020)	(0.020)	(0.022)	(0.017)	(0.015)	(0.015)	(0.013)	(0.016)
Vaccine + Herd 80%	0.023	-0.001	-0.010	0.023	0.019	0.014	0.006	0.021	0.026
	(0.019)	(0.020)	(0.019)	(0.022)	(0.017)	(0.015)	(0.015)	(0.014)	(0.018)
Vaccine + Herd 60% + Current	$0.034^{*}$	-0.004	0.014	0.027	0.028	-0.012	0.003	-0.003	0.005
	(0.020)	(0.020)	(0.020)	(0.022)	(0.018)	(0.014)	(0.015)	(0.012)	(0.017)
Vaccine + Herd 70% + Current	$0.035^{*}$	0.007	0.001	0.006	0.003	-0.006	-0.030**	-0.006	0.017
	(0.020)	(0.020)	(0.020)	(0.022)	(0.017)	(0.014)	(0.013)	(0.012)	(0.017)
Vaccine + Herd 80% + Current	0.005	-0.019	0.006	$-0.037^{*}$	0.016	-0.003	0.004	-0.005	$-0.036^{**}$
	(0.019)	(0.020)	(0.020)	(0.020)	(0.017)	(0.014)	(0.015)	(0.012)	(0.015)
Outcome range	$\{0,1\}$	{0,1}	$\{0,1\}$	$\{0,1\}$	{0,1}	$\{0,1\}$	$\{0,1\}$	$\{0,1\}$	{0,1}
Control outcome mean	0.17	0.19	0.19	0.26	0.12	0.08	0.09	0.06	0.12
Control outcome std. dev.	0.38	0.39	0.39	0.44	0.32	0.27	0.28	0.25	0.32
Observations	5,619	5,619	5,619	5,619	5,619	5,619	5,619	5,619	5,619
$R^2$	0.103	0.081	0.069	0.151	0.057	0.047	0.095	0.070	0.062

Table S16: Effect of different types of vaccine information on reasons for becoming less hesitant, among treated respondents. All specifications include country × block fixed effects and (standardized) pre-treatment wait until vaccination as covariates (omitted to save space), weight observations by the inverse probability of treatment assignment, and are estimated using OLS. Because control respondents did not answer this question, the baseline category is the Vaccine only information treatment. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

	Outcome variable: Months would			
	Vaccine	Willing	wait to get	Encourage
	willingness	to take a	vaccinated	others to get
	scale	vaccine	(reversed)	vaccinated
	(1)	(2)	(3)	(4)
Any vaccine information	0.343	0.136	0.109	-0.002
Any vaccine information $\times$ Woman	(0.253) 0.028 (0.050)	(0.109) $0.039^{*}$	(0.645) $0.239^{**}$ (0.120)	(0.120) 0.014 (0.025)
Any vaccine information $\times$ Aged 25-34	$(0.050) \\ 0.088 \\ (0.074)$	(0.021) -0.010 (0.032)	$(0.120) \\ -0.136 \\ (0.169)$	(0.025) -0.021 (0.038)
Any vaccine information $\times$ Aged 35-44	(0.074)	(0.002)	(0.103)	(0.050)
	0.078	-0.007	-0.062	-0.056
	(0.076)	(0.033)	(0.184)	(0.041)
Any vaccine information $\times$ Aged 45-54	0.039	-0.032	-0.142	-0.022
	(0.083)	(0.034)	(0.189)	(0.040)
Any vaccine information $\times$ Aged 55-64	-0.057	-0.029	$-0.590^{**}$	-0.029
	(0.094)	(0.039)	(0.254)	(0.044)
Any vaccine information $\times$ Aged 65+	$0.097 \\ (0.092)$	-0.002 (0.039)	-0.217 (0.201)	$0.015 \\ (0.044)$
Any vaccine information $\times$ Middle SES	-0.120 (0.097)	-0.035 (0.037)	$\begin{array}{c} 0.133 \\ (0.213) \end{array}$	-0.010 (0.044)
Any vaccine information × High SES	-0.083	-0.034	0.255	-0.016
	(0.091)	(0.034)	(0.206)	(0.042)
Any vaccine information $\times$ Would vote for President	0.081	0.008	0.010	0.004
	(0.065)	(0.025)	(0.141)	(0.028)
Any vaccine information $\times$ Primary education	0.053 (0.242)	-0.061 (0.105)	$0.192 \\ (0.597)$	0.133 (0.112)
Any vaccine information $\times$ Secondary education	-0.230	-0.111	-0.186	0.041
	(0.222)	(0.098)	(0.580)	(0.104)
Any vaccine information $\times$ University education	-0.266	-0.121	-0.169	0.060
	(0.225)	(0.099)	(0.586)	(0.105)
Any vaccine information $\times$ Other higher education	-0.197 (0.229)	-0.107 (0.100)	$\begin{array}{c} 0.131 \\ (0.591) \end{array}$	0.043 (0.106)
Outcome range	[1,5]	$\{0,1\}$	[ <b>0</b> ,12]	$\{0,1\}$
Control outcome mean	3.17	0.40	5.78	0.54
Control outcome std. dev	1.18	0.49	4.38	0.50
Observations	6,947	6,947	6,872	6,655
$R^2$	0.487	0.494	0.767	0.361

Table S17: Effect of any vaccine information on vaccine willingness, by pre-treatment covariate. All specifications include country  $\times$  block fixed effects and (standardized) pretreatment wait until vaccination as covariates (omitted to save space), weight observations by the inverse probability of treatment assignment, and are estimated using OLS. Lower-order interaction terms are omitted to save space; the omitted categories are aged 18-24, would not vote for the President, and university education. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

# S10 Heterogeneity in the effect of herd immunity information

We next examine the effect of herd immunity treatments that induced respondents to update their beliefs to different degrees and in different directions, relative to their prior beliefs. Using the specification described in S3 Appendix, column (1) first seeks to validate whether the herd immunity information altered respondents' posterior beliefs about the level of vaccination required to achieve herd immunity. Indeed, respondents whose prior beliefs upwards (downwards). Columns (2)-(5) then examine the effect of such updating on vaccine willingness, finding little evidence to suggest that respondents that updated their posterior beliefs in different ways adopted different stances toward vaccination. This finding is robust to considering herd immunity treatments that induced respondents to update positively or negatively (panel A) or more subtle forms degrees of updating relative to a control group that received information within 5 percentage points either side of their prior belief (panel B). The results ultimately suggest that learning about herd immunity rates on their own did not play a key role in explaining vaccine willingness.

# S11 Heterogeneity in the effect of current willingness information

While providing information about the current willingness of the population to get vaccinated does not affect vaccine willingness on average, this null finding may mask variation in responses that depends on the direction in which the information encouraged respondents to update their posterior beliefs about communal uptake rates. Indeed, the free riding logic suggests that individuals that come to believe that more (less) people will get vaccinated than they previously

	Outcome variable:				
	Posterior belief	<b>X</b> 7 ·	****	Months would	
	about rate required for herd immunity (1)	Vaccine willingness scale (2)	Willing to take a vaccine (3)	wait to get vaccinated (reversed) (4)	Encourage others to get vaccinated (5)
Panel A: Prior beliefs above/below reporte	d expert herd ra	te			
Prior belief below reported herd rate	$3.624^{***}$ (1.151)	$0.060 \\ (0.074)$	-0.012 (0.032)	-0.007 (0.213)	-0.028 (0.039)
Outcome range	[0-100]	[1-5]	{0,1}	[0,12]	$\{0,1\}$
Control outcome mean	84.02	3.57	0.55	7.22	0.69
Control outcome std. dev.	14.89	1.08	0.50	4.06	0.46
Observations	2,801	2,955	2,955	2,919	2,821
$R^2$	0.637	0.496	0.476	0.729	0.415
Panel B: Prior beliefs relative to reported	expert herd rate				
Prior belief 5-15pp below reported herd rate	$4.282^{**}$	0.020	-0.051	-0.220	0.012
	(1.881)	(0.115)	(0.046)	(0.295)	(0.059)
Prior belief 15pp below reported herd rate	$6.933^{***}$	0.036	0.012	-0.078	-0.028
	(2.393)	(0.137)	(0.055)	(0.387)	(0.070)
Prior belief 5-15pp above reported herd rate	-1.192	-0.063	-0.005	-0.256	0.011
	(1.044)	(0.069)	(0.031)	(0.184)	(0.037)
Prior belief 15pp above reported herd rate	$-3.871^{***}$	-0.049	0.045	-0.038	$0.071^{*}$
	(1.289)	(0.082)	(0.039)	(0.230)	(0.043)
Outcome range	[0,100]	[1,5]	$\{0,1\}$	[0,12]	$\{0,1\}$
Control outcome mean	74.46	3.36	0.44	6.29	0.56
Control outcome std. dev.	12.66	1.10	0.50	4.28	0.50
Observations	2,801	2,955	2,955	2,919	2,821
$R^2$	0.638	0.496	0.477	0.729	0.416

Table S18: Effect of different types of different expert opinion herd immunity opinion on vaccine willingness, by how the information relates to individual prior beliefs. All specifications include country × block fixed effects, prior belief level fixed effects, and (standardized) pre-treatment wait until vaccination as covariates (omitted to save space) and are estimated using OLS. The sample is restricted to respondents that received a treatment that reported an expert herd immunity rate. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

expected, will become less (more) willing to vaccinate themselves. In contrast, if individuals regard the intentions of others as informative about their own costs and benefits or seek to coordinate their behavior with that of others, then we should expect to observe the reverse relationship. Using the specification described in S3 Appendix, Table S19 detects no evidence to support either logic: respondents that were informed of a current willing that exceed their prior belief became no more or less willing to get vaccinated. As the main paper notes, this suggests that simple forms of free riding, social learning, or coordination are unlikely to be important drivers vaccine willingness.

## S12 Pre-treatment vaccine hesitancy and prior beliefs

As shown in the main paper, beliefs about the vaccination rates required to achieve herd immunity and the current level of willingness in the population appear to coordinate individuals in a more subtle way: respondents became more willing to get vaccinated when they learned that the population was on track to achieve herd immunity. While the results in the main paper demonstrate this experimentally, we conduct a further analysis based on respondents' prior beliefs to assess this logic correlationally before treatments were delivered. To do so, we examine the interaction between the two prior beliefs using the following OLS regression within our full sample (not just among hesitant respondents):

$$Y_{ic} = \beta_0 + \beta_1 Herd \ prior_{ic} + \beta_2 Willing \ prior_{ic} + \beta_3 (Herd \ prior_{ic} \times Willing \ prior_{ic}) + \varepsilon_{ic}.$$
 (8)

The results, which are reported in Table S20 for the three outcomes measured before treatment, find a statistically significant positive interaction effect in each case. As with the experimental evidence, this suggests that individuals who believed—before treatment—that a given level of mass vaccination is required to achieve herd immunity were more willing to get vaccinated if

	Outcome variable:				
	Posterior belief			Months would	
	about rate	Vaccine	Willing	wait to get	Encourage
	municipal	willingness	to take a	vaccinated	others to get
	willingness	scale	vaccine	(reversed)	vaccinated
	(1)	(2)	(3)	(4)	(5)
Panel A: Prior beliefs above/below current willi	ngness				
Current	$-1.491^{**}$	0.043	0.024	$0.253^{**}$	0.026
	(0.623)	(0.042)	(0.017)	(0.108)	(0.017)
Prior below current willingness	$-25.857^{***}$	$-0.180^{***}$	$-0.067^{***}$	$-0.291^{***}$	$-0.123^{***}$
c .	(0.551)	(0.027)	(0.011)	(0.071)	(0.013)
Current $\times$ Prior below current willingness	3.296***	0.021	-0.005	-0.091	-0.003
6	(1.067)	(0.054)	(0.023)	(0.145)	(0.024)
Outcome range	[0,100]	[1,5]	{0,1}	[0,12]	$\{0,1\}$
Control outcome mean	61.81	3.17	0.40	5.78	0.54
Control outcome std. dev.	24.37	1.18	0.40	4.38	$0.54 \\ 0.50$
Observations	6,747	6,951	6,951	4.38 6,876	6,659
$R^2$	0.402	0.438	0,931	0,870	0,059
		0.438	0.444	0.719	0.504
Panel B: Prior beliefs relative to current willing		0.000	0.047	0.070	0.005***
Current	-0.184	0.029	0.047	0.078	0.065**
	(1.002)	(0.064)	(0.030)	(0.150)	(0.031)
Prior 5-15pp below current willingness	5.917***	0.079*	0.041**	0.190*	0.044**
	(0.748)	(0.044)	(0.019)	(0.106)	(0.021)
Prior 15pp below current willingness	14.594***	0.059	0.040**	0.100	0.075***
	(0.788)	(0.047)	(0.019)	(0.115)	(0.021)
Prior 5-15pp above current willingness	$-8.501^{***}$	-0.060	-0.009	-0.050	$-0.041^{*}$
	(0.826)	(0.043)	(0.019)	(0.114)	(0.022)
Prior 15pp above current willingness	$-26.520^{***}$	$-0.201^{***}$	$-0.060^{***}$	$-0.304^{***}$	$-0.110^{***}$
	(0.782)	(0.038)	(0.017)	(0.099)	(0.020)
Current $\times$ Prior 5-15pp below current willingness	-0.687	-0.063	-0.046	0.263	-0.056
	(1.347)	(0.088)	(0.040)	(0.216)	(0.041)
Current $\times$ Prior 15pp below current willingness	-1.124	0.112	0.002	0.140	-0.028
	(1.383)	(0.099)	(0.042)	(0.245)	(0.041)
Current $\times$ Prior 5-15pp above current willingness	2.681*	0.113	-0.025	0.148	-0.039
	(1.590)	(0.087)	(0.042)	(0.242)	(0.046)
Current × Prior 15pp above current willingness	$2.622^{*}$	0.013	-0.036	0.083	-0.050
	(1.534)	(0.077)	(0.035)	(0.198)	(0.038)
Outcome range	[0,100]	[1,5]	{0,1}	[0,12]	$\{0,1\}$
Control outcome mean	61.810	3.170	0.400	5.780	0.540
Control outcome std. dev.	24.370	1.180	0.490	4.380	0.540 0.500
Observations	6,747	6,951	6,951	4.380 6,876	6,659
$R^2$	0.510	0.931 0.442	0,931 0.447	0,870	0.360
n	0.510	0.442	0.447	0.720	0.360

Table S19: Effect of vaccine information on vaccine willingness, by how current willingness relates to individual prior beliefs. All specifications include country × block fixed effects and (standardized) pre-treatment wait until vaccination as covariates (omitted to save space), weight observations by the inverse probability of treatment assignment, and are estimated using OLS. All treatments and associated interactions are included in panel B, but omitted to save space. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

	Outcome variable:			
	Vaccine willingness scale (1)	Willing to take a vaccine (2)	Months would wait to get vaccinated (reversed) (3)	
Constant	1.920537***	-0.006324	$0.379705^{*}$	
	(0.067262)	(0.016529)	(0.229238)	
Pre-treatment uptake rate	$0.003240^{**}$	0.000581	$0.012471^{**}$	
	(0.001468)	(0.000414)	(0.004998)	
Pre-treatment herd immunity	$0.010004^{***}$	$0.001264^{***}$	$0.037189^{***}$	
	(0.000938)	(0.000289)	(0.003279)	
Pre-treatment uptake $\times$ herd immunity	$0.000032^{*}$	$0.000042^{***}$	$0.000288^{***}$	
	(0.000018)	(0.00006)	(0.000061)	
Outcome range	[1,5]	{0,1}	[0,12]	
Observations	7,521	7,521	7,521	
$R^2$	0.105	0.099	0.177	

Table S20: Correlation between prior beliefs and prior vaccine willingness. All specifications are estimated using OLS. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

they believe that many others are also likely to get vaccinated.

# S13 Heterogeneity in the effect of motivational messages

To understand which types of individuals may be most responsive to different types of motivational message, we again examine heterogeneity in treatment effects across demographic subgroups about which policymakers could conceivably obtain data at scale—and could thus microtarget campaign messaging towards. Specifically, we consider a respondent's sex, age category, highest level of completed education, socioeconomic class, and intention to vote for the President. Estimating the specifications described in S3 Appendix, Table S21 shows that the treatments produced similar effects on different types of hesitant respondent. While there is some evidence to suggest that older respondents were less responsive to the social approval message, the effects are largely similar across types of respondent.

## S14 Interaction between informational and motivational messages

While both basic vaccine information and social approval messages proved effective at increasing vaccine willingness among hesitant respondents, it may be important from a policy perspective to understand whether these messages serve as substitutes or complements. To do so, we examine the interaction between the two treatment conditions, which were assigned independently. The results in Table S22 find no systematic evidence of a positive or negative interaction between any of the motivational messages and receiving basic vaccine information. This suggests that the two types of messaging campaigns may be largely additive.

# S15 Effects on encouraging others to vaccinate measured as a scale

In the paper we examine willingness to encourage others to get vaccinated using a binary variable that focuses on those that are likely or very likely do so. Tables S23-S25 show that similar results hold for the underlying four-point scale. While the ordinal measure is more fine-grained, it also assumes that each unit increase in the outcome captures a similar change.

## S16 Demand for further information

The main paper focused on vaccine willingness in terms of intentions to act get vaccinated and encourage others to get vaccinated. To examine a less direct behavioral outcome, we also

	Outcome variable:			
	Months would			
	Vaccine	Willing	wait to get	Encourage
	willingness scale	to take a vaccine	vaccinated (reversed)	others to get vaccinated
	(1)	(2)	(reversed) (3)	(4)
Altruism	-0.307	0.008	-0.138	-0.136
	(0.264)	(0.112)	(0.797)	(0.121) $-0.343^{***}$
Economic recovery	-0.179 (0.259)	-0.073 (0.113)	0.703 (0.639)	(0.128)
Social Approval	0.067	0.219**	$1.645^{**}$	-0.008
Altruism × Woman	(0.256) 0.003	(0.108) -0.010	(0.834) 0.054	(0.131) -0.012
	(0.062)	(0.026)	(0.166)	(0.029)
Economic recovery × Woman	0.075 (0.062)	0.005 (0.026)	-0.035 (0.165)	-0.010 (0.029)
Social status $\times$ Woman	0.057	-0.014	0.047	0.004
Altruism × Aged 25-34	(0.062) 0.015	(0.026) -0.037	(0.174) 0.041	(0.030) -0.024
e e	(0.095)	(0.041)	(0.244)	(0.046)
Economic recovery × Aged 25-34	0.061 (0.095)	-0.038 (0.041)	-0.232 (0.237)	0.086* (0.046)
Social status × Aged 25-34	0.039	-0.038	0.525**	0.012
Altruism × Aged 35-44	(0.093) -0.030	(0.041) -0.028	(0.249) -0.009	(0.047) 0.005
Antuisin × Agea 55-44	(0.093)	(0.041)	(0.273)	(0.048)
Economic recovery × Aged 35-44	-0.064	-0.056	-0.265 (0.265)	0.046
Social status × Aged 35-44	(0.095) -0.095	(0.041) -0.052	(0.265) 0.358	(0.048) -0.024
-	(0.096)	(0.042)	(0.271)	(0.048)
Altruism $\times$ Aged 45-54	(0.142) (0.102)	0.047 (0.043)	0.047 (0.284)	(0.041) (0.049)
Economic recovery $\times$ Aged 45-54	-0.053	-0.039	-0.346	0.028
Social status × Aged 45-54	(0.103) -0.038	(0.042) -0.035	(0.282) -0.020	(0.048) 0.003
-	(0.103)	(0.042)	(0.295)	(0.049)
Altruism $\times$ Aged 55-64	0.127 (0.114)	0.016 (0.047)	0.180 (0.294)	-0.027 (0.051)
Economic recovery × Aged 55-64	0.092	0.019	0.087	0.025
Social status × Aged 55-64	(0.124) 0.082	(0.052) 0.019	(0.303) 0.374	(0.053) -0.054
Social status × Aged 55-64	(0.116)	(0.049)	(0.309)	(0.053)
Altruism × Aged 65+	-0.153	-0.053	-0.046	-0.024
Economic recovery × Aged 65+	(0.118) -0.079	(0.050) -0.061	(0.294) $-0.575^*$	(0.053) 0.030
	(0.112)	(0.049)	(0.310)	(0.054)
Social status × Aged 65+	-0.106 (0.114)	$-0.117^{**}$ (0.048)	-0.232 (0.303)	-0.028 (0.054)
Altruism $\times$ Middle SES	0.105	0.010	0.413	0.012
Economic recovery × Middle SES	(0.124) 0.101	(0.049) 0.033	(0.293) 0.255	(0.052) 0.035
	(0.128)	(0.049)	(0.286)	(0.052)
Social status × Middle SES	0.108 (0.123)	0.003 (0.047)	-0.076 (0.320)	$(0.087^{*})$ (0.052)
Altruism $\times$ High SES	0.037	-0.016	0.304	0.033
Economic recovery × High SES	(0.119) 0.107	(0.046) 0.035	(0.271) 0.191	(0.049) 0.038
	(0.122)	(0.036)	(0.264)	(0.049)
Social status $\times$ High SES	0.118	0.014	0.080 (0.304)	0.104**
Altruism $\times$ Would vote for President	(0.119) -0.024	(0.045) -0.029	(0.304) -0.008	(0.049) $-0.081^{**}$
	(0.082)	(0.033)	(0.214) 0.445**	(0.035)
Economic recovery $\times$ Would vote for President	0.102 (0.085)	0.030 (0.034)	0.445 <sup>**</sup> (0.222)	0.026 (0.036)
Social status $\times$ Would vote for President	0.014	-0.022	-0.225	-0.047
Altruism × Primary education	(0.086) 0.078	(0.034) 0.011	(0.220) -0.493	(0.036) 0.138
	(0.235)	(0.104)	(0.727)	(0.113)
Economic recovery $\times$ Primary education	-0.024 (0.224)	0.096 (0.101)	-0.790 (0.583)	0.352*** (0.115)
Social status × Primary education	0.044	-0.081	$-1.412^{*}$	0.023
Altruism × Secondary education	(0.224) 0.273	(0.099) 0.041	(0.755) -0.200	(0.121) 0.168*
	(0.210)	(0.093)	(0.684)	(0.099)
Economic recovery $\times$ Secondary education	-0.023 (0.199)	0.066 (0.091)	-0.793 (0.485)	0.328*** (0.104)
Social status × Secondary education	-0.170	-0.144	$-1.716^{**}$	-0.042
Altruism × University education	(0.198)	(0.088)	(0.706)	(0.110) 0.103*
Autumn A University education	0.295 (0.212)	(0.059) (0.095)	-0.113 (0.685)	$0.193^{*}$ (0.100)
Economic recovery $\times$ University education	0.041	0.107	-0.702	0.273***
Social status × University education	(0.203) -0.086	(0.092) -0.104	(0.487) -1.695**	(0.105) -0.011
-	(0.202)	(0.089)	(0.712)	(0.111)
Altruism $\times$ Other higher education	0.219 (0.215)	0.030 (0.096)	-0.367 (0.697)	0.140 (0.102)
	0.020	0.066	-0.670	0.330***
Economic recovery × Other higher education			(0 511)	(0.107)
	(0.207) -0.208	(0.094) -0.125	(0.511) -1.658**	
Economic recovery $\times$ Other higher education Social status $\times$ Other higher education	(0.207) -0.208 (0.207)	(0.094) -0.125 (0.092)	(0.511) $-1.658^{**}$ (0.727)	-0.035 (0.113)
Social status $\times$ Other higher education	-0.208 (0.207)	-0.125 (0.092)	$-1.658^{**}$ (0.727)	-0.035 (0.113)
	-0.208	-0.125	$-1.658^{**}$	-0.035
Social status × Other higher education Outcome range	-0.208 (0.207) [1,5]	-0.125 (0.092) {0,1}	-1.658** (0.727) [0,12]	-0.035 (0.113) {0,1}

Table S21: Effect of any motivational messages on vaccine willingness, by pre-treatment covariate. All specifications include country  $\times$  block fixed effects and (standardized) pre-treatment wait until vaccination as covariates (omitted to save space) and are estimated using OLS. Lower-order interaction terms are omitted to save space. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p 43 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

	<b>Outcome variable:</b> Months would			
	Vaccine	Willing	wait to get	Encourage
	willingness	to take a	vaccinated	others to get
	scale	vaccine	(reversed)	vaccinated
	(1)	(2)	(3)	(4)
Altruism	0.023	0.000	0.149	0.030
Economic recovery	(0.057)	(0.023)	(0.123)	(0.030)
	0.019	0.006	0.108	$0.062^{**}$
	(0.055)	(0.023)	(0.119)	(0.029)
Social status	$0.142^{**}$	$0.056^{**}$	$0.394^{***}$	$0.075^{**}$
	(0.057)	(0.025)	(0.150)	(0.031)
Any vaccine information	$0.143^{***}$	$0.038^{**}$	$0.511^{***}$	$0.061^{**}$
	(0.045)	(0.019)	(0.115)	(0.025)
Altruism $\times$ Any vaccine information	0.001	0.019	-0.091	-0.016
	(0.068)	(0.028)	(0.157)	(0.035)
Economic recovery $\times$ Any vaccine information	0.045	0.021	-0.147	-0.040
	(0.066)	(0.028)	(0.154)	(0.034)
Social status $\times$ Any vaccine information	-0.048 (0.068)	-0.013 (0.029)	-0.171 (0.181)	(0.040) (0.036)
Outcome range	[1,5]	$\{0,1\}$	[0,12]	$\{0,1\}$
Control outcome mean	3.16	0.40	5.71	0.51
Control outcome std. dev.	1.15	0.49	4.28	0.50
Observations $R^2$	<b>6,95</b> 1	<b>6,95</b> 1	6,876	<b>6,659</b>
	0.485	0.493	0.767	0.358

Table S22: Effect of any vaccine information on vaccine willingness, by motivational message. All specifications include country × block fixed effects and (standardized) pre-treatment wait until vaccination as covariates (omitted to save space), weight observations by the inverse probability of treatment assignment, and are estimated using OLS. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

	Outcome variable:
	Encourage others to get
	vaccinated scale
	(1)
Panel A: All countries po	
Any vaccine information	0.094***
	(0.023)
	()
Outcome range	{1,2,3,4}
Control outcome mean	2.56
Control outcome std. dev	1.01
Observations	6,659
$R^2$	0.417
Panel B: Argentina	
Any vaccine information	0.073
	(0.056)
	(( )
Outcome range	{1,2,3,4}
Control outcome mean	2.44
Control outcome std. dev	0.99
Observations R <sup>2</sup>	1,109 0.389
-	0.303
Panel C: Brazil	
Any vaccine information	0.079
	(0.058)
Outcome range	{1,2,3,4}
Control outcome mean	2.45
Control outcome std. dev	1.12
Observations	1,134
$R^2$	0.483
Panel D: Chile	
Any vaccine information	0.155**
Any vaccine information	(0.060)
	(0.000)
Outcome range	{1,2,3,4}
Control outcome mean	2.37
Control outcome std. dev	1.06
Observations	1,080
$R^2$	0.418
Panel E: Colombia	
Any vaccine information	0.129**
	(0.052)
Outcome range	{1,2,3,4}
Control outcome mean	2.64
Control outcome std. dev	0.97
Observations R <sup>2</sup>	1,085
-	0.447
Panel F: México	
Any vaccine information	0.105*
	(0.055)
Outcome range	{1,2,3,4}
Control outcome mean	2.80
Control outcome std. dev	0.93
Observations	1,075
$R^2$	0.367
Panel G: Perú Any vaccine information	0.026
rany vaccine information	(0.026)
	(0.000)
	<i></i>
Outcome range	{1.2.3.4}
Outcome range Control outcome mean	$\{1,2,3,4\}$ 2.63
Outcome range Control outcome mean Control outcome std. dev	
Control outcome mean	2.63

Table S23: Effect of any vaccine information on willingness to encourage others to get vaccinated scale. All specifications include country  $\times$  block fixed effects and (standardized) pre-treatment wait until vaccination as covariates (omitted to save space), weight observations by the inverse probability of treatment assignment, and are estimated using OLS. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

	Outcome variable: Encourage others to get vaccinated scale (1)
Vaccine	0.083***
Vaccine + Herd 60%	$(0.030) \\ 0.081^* \\ (0.042)$
Vaccine + Herd 70%	0.100**
Vaccine + Herd 80%	$(0.043) \\ 0.080^* \\ (0.043)$
Vaccine + Herd 60% + Current	0.160***
Vaccine + Herd 70% + Current	(0.041) $0.116^{***}$ (0.042)
Vaccine + Herd 80% + Current	0.062
Vaccine + Biden	(0.042) $0.090^{***}$ (0.035)
Outcome range	$\{1,2,3,4\}$
Control outcome mean	2.56
Control outcome std. dev Observations	1.01 6,659
$R^2$	0.397

Table S24: Effect of different types of vaccine information treatment on willingness to encourage others to get vaccinated scale. All specifications include country  $\times$  block fixed effects and (standardized) pre-treatment wait until vaccination as covariates (omitted to save space), weight observations by the inverse probability of treatment assignment, and are estimated using OLS. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

	Outcome variable:
	Encourage
	others to get
	vaccinated scale
	(1)
Panel A: All countries po Altruism	0.029
	(0.028)
Economic recovery	0.043
	(0.028)
Social approval	0.080*** (0.028)
Outcome range	{1,2,3,4}
Control outcome mean Control outcome std. dev	2.60 1.01
Observations	6,659
$R^2$	0.395
Panel B: Argentina	
Altruism	0.012
Economic recovery	(0.069) 0.006
Leononine recovery	(0.067)
Social approval	0.031
	(0.071)
Outcome range	{1,2,3,4}
Control outcome mean	2.52
Control outcome std. dev	0.98
Observations	1,109
R <sup>2</sup>	0.374
Panel C: Brazil Altruism	0.022
And disin	(0.022 (0.066)
Economic recovery	0.001
	(0.068)
Social approval	0.095
	(0.064)
Outcome range	{1,2,3,4}
Control outcome mean	2.48
Control outcome std. dev	1.08
Observations R <sup>2</sup>	1,134 0.475
Panel D: Chile	0.410
Altruism	0.078
	(0.074)
Economic recovery	0.103
Social approval	(0.071) 0.094
social approval	(0.074)
_	
Outcome range Control outcome mean	{1,2,3,4} 2.48
Control outcome std. dev	1.06
Observations	1,080
$R^2$	0.390
Panel E: Colombia	
Altruism	0.132** (0.064)
Economic recovery	0.062
	(0.064)
Social approval	$0.107^{*}$
	(0.063)
Outcome range	{1,2,3,4}
Control outcome mean	2.65
Control outcome std. dev	0.94
Observations R <sup>2</sup>	1,085 0.411
Panel F: México	0.411
Altruism	0.030
	(0.069)
Economic recovery	0.064
Conial annuar-1	(0.070)
Social approval	0.075 (0.070)
Outcome range	{1,2,3,4}
Control outcome mean Control outcome std. dev	2.84 0.96
Observations	1,075
$R^2$	0.344
Panel G: Perú	
Altruism	-0.091
Economic recovery	(0.069) 0.029
Leonomic recovery	(0.068)
Social approval	0.086
	(0.070)
Outcome range	{1,2,3,4}
Control outcome mean	{1,2,3,4} 2.63
Control outcome std. dev	0.97
Observations	1,176
$R^2$	0.328

Table S25: Effect of different types of motivational message on willingness to encourage others to get vaccinated scale. All specifications include country × block fixed effects and (standardized) pre-treatment wait until vaccination as covariates (omitted to save space) and are estimated using OLS. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

report the effects of the treatments on interest in receiving additional information COVID-19 vaccines from the Pan American Health Organization. Tables S26-S28 report the effects of the information and motivational treatments on seeking such information. In each case, we find little evidence to suggest that the treatments moved interest in receiving further information. It should be noted that this opportunity came after a 25 minute survey that already provided treated respondents with considerable vaccine information already. The null effects could then be explained by treated respondents already feeling sufficiently informed about COVID-19 vaccines that they did not need to expend additional effort to acquire further information.

## S17 Population-weighted treatment effects

In estimating treatment effects, we did not apply population weights for each respondent to maximize the efficiency of our estimation of average treatment effects within a sample that was already nationally representative along several key dimensions. To more thoroughly examine how the results extend to the national hesitant population, we further weight our estimates in two ways (taking the product of inverse probability of treatment assignment weights and population weights, wherever relevant). First, within each country, we weight each respondent according to the relative frequency in the survey of the respondent's cell—defined by their age category, education, region, and gender—relative to the corresponding cell in the most recent available census. In other words, we reweight observations according to the joint distribution over these four variables in the population. Second, we instead apply rake weights to reweight observations according to the national distribution, relative to the national distribution, relative to the national distribution, across the following variables: age category, education, region, gender, and (using data provided by Netquest) socioeconomic class. In each case, a small number of observations are dropped because weights could not be defined.

The results in Tables S29-S36 show that similar results apply. If anything, the positive

	0.1		
	Outcome variable		
	Requested	Visited	
	more	PAHO	
	information	website	
	(1)	(2)	
Panel A: All countries po	oled		
Any vaccine information	-0.020	0.001	
	(0.015)	(0.012)	
	(0,1)	(0.4)	
Outcome range	{0,1}	$\{0,1\}$	
Control outcome mean	0.57	0.22	
Control outcome std. dev.	0.50	0.42	
Observations	6,082	6,082	
$R^2$	0.107	0.097	
Panel B: Argentina			
Any vaccine information	0.008	0.041	
	(0.037)	(0.028)	
<b>A</b> .	(0,1)	(0.1)	
Outcome range	{0,1}	$\{0,1\}$	
Control outcome mean	0.48	0.19	
Control outcome std. dev.	0.50	0.40	
Observations	1,019	1,019	
$R^2$	0.088	0.161	
Panel C: Brazil			
Any vaccine information	-0.006	0.012	
	(0.038)	(0.029)	
Outcome range	$\{0,1\}$	$\{0,1\}$	
Control outcome mean	0.49	0.19	
Control outcome std. dev.	0.50	0.39	
Observations	1,007	1,007	
$R^2$	0.054	0.060	
Panel D: Chile			
Any vaccine information	-0.020	0.046	
,	(0.036)	(0.030)	
		. ,	
Outcome range	$\{0,1\}$	$\{0,1\}$	
Control outcome mean	0.52	0.18	
Control outcome std. dev.	0.50	0.38	
Observations	1,006	1,006	
$R^2$	0.110	0.088	
Panel E: Colombia			
Any vaccine information	-0.033	-0.029	
	(0.035)	(0.032)	
Outcome range	$\{0,1\}$	$\{0,1\}$	
Control outcome mean	0.62	0.25	
Control outcome std. dev.	0.48	0.44	
Observations	1,011	1,011	
$R^2$	0.101	0.080	
Panel F: México			
Any vaccine information	-0.039	-0.050	
	(0.036)	(0.031)	
Outcome range	$\{0,1\}$	$\{0,1\}$	
Control outcome mean	0.62	0.26	
Control outcome std. dev.	0.49	0.44	
Observations	1,005	1,005	
$R^2$	0.085	0.100	
Panel G: Perú			
Any vaccine information	-0.031	-0.016	
, racenie information	(0.033)	(0.032)	
	()	(=)	
Outcome range	$\{0,1\}$	$\{0,1\}$	
Control outcome mean	0.68	0.27	
Control outcome std. dev.	0.46	0.45	
Observations	1,034	1,034	
Observations			

Table S26: Effect of any vaccine information on demand for further vaccine information. All specifications include country × block fixed effects and (standardized) pre-treatment wait until vaccination as covariates (omitted to save space), weight observations by the inverse probability of treatment assignment, and are estimated using OLS. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

	Outcome va	ariable:
	Requested	Visited
	more	PAHO
	information	website
	(1)	(2)
Vaccine	-0.009	0.012
	(0.019)	(0.017)
Vaccine + Biden	-0.027	-0.014
	(0.022)	(0.018)
Vaccine + Herd 60%	-0.021	-0.001
	(0.027)	(0.023)
Vaccine + Herd 70%	-0.003	0.020
	(0.026)	(0.023)
Vaccine + herd 80%	-0.024	-0.018
	(0.027)	(0.022)
Vaccine + Herd 60% + Current	-0.034	0.002
	(0.027)	(0.023)
Vaccine + Herd 70% + Current	-0.025	-0.012
	(0.027)	(0.022)
Vaccine + Herd 80% + Current	-0.037	-0.005
	(0.027)	(0.022)
Outcome range	$\{0,1\}$	$\{0,1\}$
Control outcome mean	0.57	0.22
Control outcome std. dev.	0.50	0.42
Observations	6,082	6,082
$R^2$	0.101	0.098

Table S27: Effect of different types of vaccine information treatment on demand for further vaccine information. All specifications include country × block fixed effects and (standardized) pre-treatment wait until vaccination as covariates (omitted to save space), weight observations by the inverse probability of treatment assignment, and are estimated using OLS. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

	Outcome v	ariable:
	Requested	Visited
	more information	PAHO website
	(1)	(2)
Panel A: All countries po		-
Altruism	-0.009 (0.017)	-0.027 (0.015)
Economic recovery	(0.017) -0.014	$-0.028^{\circ}$
	(0.018)	(0.015)
Social approval	0.014 (0.018)	-0.006 (0.015)
Outcome range	{0,1}	{0,1}
Control outcome mean	0.56	0.24
Control outcome std. dev.	0.50	0.43
Observations R <sup>2</sup>	6,082 0.097	6,082 0.090
Panel B: Argentina		
Altruism	0.014 (0.043)	-0.043 (0.036)
Economic recovery	-0.000	-0.023
Social annroad	(0.045) 0.021	(0.037) -0.026
Social approval	(0.021)	(0.036)
Outcome range	$\{0,1\}$	$\{0,1\}$
Control outcome mean	0.49	0.26
Control outcome std. dev. Observations	0.50 1,019	0.44 1,019
$R^2$	0.085	0.135
Panel C: Brazil	0.000**	0.05
Altruism	$-0.089^{**}$ (0.044)	-0.051 (0.033)
Economic recovery	-0.057	-0.011
Social approval	(0.044) 0.017	(0.034) 0.060
	(0.044)	(0.037)
Outcome range	{0,1}	$\{0,1\}$
Control outcome mean	0.51	0.19
Control outcome std. dev. Observations	0.50 1,007	0.39 1,007
R <sup>2</sup>	0.063	0.074
Panel D: Chile	0.000	0.045
Altruism	-0.009 (0.044)	0.012 (0.037)
Economic recovery	-0.018	-0.030
Social approval	(0.044) 0.043	(0.036) 0.010
Social approval	(0.043) (0.044)	(0.010) (0.037)
Outcome range	$\{0,1\}$	$\{0,1\}$
Control outcome mean	0.51	0.23
Control outcome std. dev. Observations	0.50 1,006	0.42 1,006
$R^2$	0.094	0.097
Panel E: Colombia Altruism	0.039	-0.010
	(0.043)	(0.038)
Economic recovery	0.081*	-0.023
Social approval	(0.043) 0.087**	(0.037) -0.021
	(0.043)	(0.037)
Outcome range	$\{0,1\}$	$\{0,1\}$
Control outcome mean	0.54	0.25
Control outcome std. dev. Observations	0.50 1,011	0.43 1,011
$R^2$	0.087	0.068
Panel F: México Altruism	0.051	0.000
	(0.043)	(0.037)
Economic recovery	-0.033 (0.044)	-0.036
Social approval	(0.044) -0.014	(0.036) -0.006
	(0.043)	(0.036)
Outcome range	$\{0,1\}$	$\{0,1\}$
Control outcome mean Control outcome std. dev.	0.58 0.49	0.22 0.42
Observations	1,005	1,005
$R^2$	0.086	0.084
Panel G: Perú Altruism	-0.061	-0.071
	(0.040)	(0.038)
Economic recovery	-0.058 (0.040)	-0.043 (0.038)
Social approval	(0.040) $-0.068^*$	(0.038) -0.050
	(0.040)	(0.039)
Outcome range	$\{0,1\}$	$\{0,1\}$
Control outcome mean Control outcome std. dev.	0.71 0.46	0.30 0.46
Observations	1,034	1,034

Table S28: Effect of different types of motivational message on demand for further vaccine information. All specifications include country  $\times$  block fixed effects and (standardized) pretreatment wait until vaccination as covariates (omitted to save space) and are estimated using OLS. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

effects of basic vaccine information on vaccine willingness and encouraging others are larger in magnitude once the population distribution is taken into account, although the effect on expected wait until vaccination once eligible is a little lower. The effects of the social approval treatment are also a little larger in magnitude. Unsurprisingly, the standard errors become larger once each type of weight is applied, although the core findings generally remain statistically significant for each type of population weight.

		Outco	me variable:	
			Months would	
	Vaccine	Willing	wait to get	Encourage
	willingness	to take a	vaccinated	others to ge
	scale	vaccine	(reversed)	vaccinated
	(1)	(2)	(3)	(4)
Panel A: All countries po	oled			
Any vaccine information	0.170***	0.067***	0.348***	0.055***
	(0.037)	(0.015)	(0.087)	(0.018)
Outcome range	[1,5]	$\{0,1\}$	[1,12]	$\{0,1\}$
Control outcome mean	3.14	0.38	5.84	0.50
Control outcome std. dev.	1.20	0.49	4.35	0.50
Observations	6,922	6,922	6,847	6,631
$R^2$	0.506	0.505	0.773	0.389
Panel B: Argentina				
Any vaccine information	$0.268^{***}$	$0.075^{*}$	$0.473^{**}$	$0.083^{*}$
	(0.094)	(0.042)	(0.216)	(0.046)
Outcome range	[1,5]	{0,1}	[1,12]	{0,1}
Control outcome mean	2.90	0.32	4.56	0.37
Control outcome std. dev.	1.12	0.47	4.42	0.48
Observations D2	1,156	1,156	1,146	1,105
R <sup>2</sup>	0.489	0.511	0.824	0.424
Panel C: Brazil	0.915***	0.192***	0.497**	0.025
Any vaccine information	0.315***	0.126***	0.427**	0.035
	(0.077)	(0.033)	(0.180)	(0.038)
Outcome range	[1,5]	$\{0,1\}$	[1,12]	{0,1}
Control outcome mean	3.15	0.35	5.87	0.43
Control outcome std. dev.	1.19	0.48	4.31	0.50
Observations	1,212	1,212	1,186	1,133
$R^2$	0.593	0.531	0.764	0.439
Panel D: Chile				
Any vaccine information	0.153	$0.070^{**}$	$0.397^{*}$	$0.086^{**}$
	(0.095)	(0.036)	(0.218)	(0.040)
Outcome range	[1,5]	{0,1}	[1,12]	{0,1}
Control outcome mean	2.94	{0,1}	4.97	0.43
Control outcome std. dev. Observations	1.28	0.47	4.26	0.49
Observations R <sup>2</sup>	1,109 0.528	1,109 0.537	1,101 0.791	1,076 0.425
Panel E: Colombia	0.020			
Any vaccine information	0.226***	0.094***	0.441***	$0.077^{*}$
,	(0.082)	(0.032)	(0.143)	(0.040)
	(	(	()	(
Outcome range	[1,5]	{0,1}	[1,12]	$\{0,1\}$
Control outcome mean	3.13	0.37	6.21	0.55
Control outcome std. dev.	1.24	0.48	4.28	0.50
Observations $R^2$	1,130	1,130	1,119	1,084
	0.506	0.526	0.834	0.408
Panel F: México Any vaccine information	-0.001	0.003	0.160	-0.002
Any vaccine information				
	(0.099)	(0.043)	(0.224)	(0.050)
Outcome range	[1,5]	$\{0,1\}$	[1,12]	$\{0,1\}$
Control outcome mean	3.60	0.55	7.32	0.69
Control outcome std. dev.	1.20	0.50	4.03	0.46
Observations	1,098	1,098	1,094	1,071
$R^2$	0.453	0.470	0.692	0.284
Panel G: Perú				
Any vaccine information	0.062	0.031	0.195	0.052
-	(0.085)	(0.036)	(0.263)	(0.044)
0.4	(1.5)	(0,1)	(1.10)	(0.1)
Outcome range	[1,5]	{0,1}	[1,12]	{0,1}
Control outcome mean	3.14	0.40	6.27	0.55
	1.06	0.49	4.22	0.50
Control outcome std. dev. Observations $R^2$	1,217 0.422	1,217 0.440	1,201 0.686	1,162 0.299

Table S29: Effect of any vaccine information on vaccine willingness, using population cell weights. All specifications include country  $\times$  block fixed effects and (standardized) pretreatment wait until vaccination as covariates (omitted to save space), weight observations by the inverse probability of treatment assignment and population weights, and are estimated using OLS. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

	Outcome variable: Months would			
	Vaccine willingness scale (1)	Willing to take a vaccine (2)	wait to get vaccinated (reversed) (3)	Encourage others to get vaccinated (4)
Vaccine	0.122**	0.053**	0.276**	0.060**
	(0.054)	(0.022)	(0.119)	(0.025)
Vaccine + Biden	0.205***	0.090***	0.382**	0.080***
	(0.065)	(0.029)	(0.168)	(0.031)
Vaccine + Herd 60%	$0.117^{*}$	0.048	0.211	0.028
	(0.067)	(0.029)	(0.168)	(0.035)
Vaccine + Herd 70%	$0.202^{***}$	$0.077^{***}$	$0.561^{***}$	$0.064^{**}$
	(0.072)	(0.029)	(0.162)	(0.032)
Vaccine + Herd 80%	$0.161^{**}$	$0.075^{**}$	$0.313^{*}$	0.037
	(0.073)	(0.033)	(0.188)	(0.034)
Vaccine + Herd 60% + Current	$0.229^{***}$	$0.100^{***}$	$0.441^{**}$	$0.128^{***}$
	(0.067)	(0.032)	(0.218)	(0.031)
Vaccine + Herd 70% + Current	$0.203^{***}$	$0.081^{***}$	$0.354^{**}$	$0.092^{***}$
	(0.073)	(0.031)	(0.174)	(0.035)
Vaccine + Herd 80% + Current	$0.150^{*}$	0.044	$0.307^{*}$	-0.019
	(0.081)	(0.031)	(0.180)	(0.036)
Outcome range	[1,5]	$\{0,1\}$	[1,12]	$\{0,1\}$
Control outcome mean	3.14	0.38	5.84	0.50
Control outcome std. dev.	1.20	0.49	4.35	0.50
Observations	6,922	6,922	6,847	6,631
$R^2$	0.452	0.448	0.722	0.358

Table S30: Effect of different types of vaccine information on vaccine willingness, using population cell weights. All specifications include country × block fixed effects and (standardized) pre-treatment wait until vaccination as covariates (omitted to save space), weight observations by the inverse probability of treatment assignment and population weights, and are estimated using OLS. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

	Outcome variable: Months would							
	Vaccine willingness scale (1)	Willing to take a vaccine (2)	wait to get vaccinated (reversed) (3)	Encourage others to get vaccinated (4)				
Current	0.083	$0.075^{*}$	0.256	0.110**				
	(0.082)	(0.040)	(0.253)	(0.043)				
Current rate below herd opinion	-0.001	0.023	0.026	0.012				
	(0.073)	(0.035)	(0.211)	(0.041)				
Current $\times$ Current rate below	-0.060	$-0.092^{*}$	-0.323	$-0.118^{**}$				
herd opinion	(0.106)	(0.050)	(0.300)	(0.056)				
Outcome range	[1,5]	$\{0,1\}$	[0,12]	$\{0,1\}$				
Control outcome mean	3.39	0.48	6.16	0.54				
Control outcome std. dev.	1.16	0.50	4.35	0.50				
Observations	2,943	2,943	2,907	2,809				
$R^2$	0.503	0.476	0.730	0.407				

Table S31: The effect of being informed that the current rate of vaccination willingness in the population is above/below the rate required for herd immunity, using population cell weights. All specifications include country × block fixed effects and (standardized) pretreatment wait until vaccination as covariates (omitted to save space), weight observations by the inverse probability of treatment assignment and population weights, and are estimated using OLS. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

		Outco	me variable:	
			Months would	_
	Vaccine willingness	Willing to take a	wait to get vaccinated	Encourage others to ge
	scale (1)	vaccine (2)	(reversed) (3)	vaccinated (4)
Panel A: All countries po		(2)	(5)	(4)
Altruism	-0.002	0.003	0.119	-0.007
Economic recovery	(0.050) 0.051	(0.021) 0.020	(0.120) -0.020	(0.024) 0.026
	(0.045)	(0.020)	(0.116)	(0.022)
Social approval	0.143*** (0.045)	0.062*** (0.021)	0.339*** (0.130)	0.048** (0.023)
Outcome range Control outcome mean	[1,5] 3.20	{0,1} 0.41	[1,12] 5.96	$\{0,1\}$ 0.53
Control outcome std. dev.	1.16	0.49	4.42	0.50
Observations R <sup>2</sup>	6,922 0.453	6,922 0.457	6,847	6,631 0.349
· · · · · · · · · · · · · · · · · · ·	0.453	0.457	0.734	0.349
Panel B: Argentina Altruism	-0.012	-0.011	0.247	-0.008
	(0.105) $0.257^{**}$	(0.056) $0.117^{**}$	(0.345) -0.047	(0.064)
Economic recovery	(0.257) (0.116)	(0.059)	-0.047 (0.309)	0.054 (0.062)
Social approval	$0.189^{*}$	0.053	0.059	0.030
	(0.104)	(0.056)	(0.282)	(0.065)
Outcome range	[1,5]	$\{0,1\}$	[1,12]	$\{0,1\}$
Control outcome mean Control outcome std. dev.	3.07 1.07	0.37	5.45 4.37	0.47
Observations	1,156	1,156	1,146	1,105
$R^2$	0.452	0.451	0.797	0.365
Panel C: Brazil Altruism	-0.083	-0.038	0.564**	0.021
	(0.120)	(0.054)	(0.277) 0.921***	(0.053)
Economic recovery	0.101	-0.004	0.921***	0.039
Social approval	(0.088) $0.144^*$	(0.042) 0.068*	(0.264) 1.044***	(0.048) 0.055
boenii uppiorui	(0.084)	(0.040)	(0.267)	(0.048)
Outcome range	[1,5]	{0,1}	[1,12]	{0,1}
Control outcome mean	3.30	0.42	5.24	0.45
Control outcome std. dev. Observations	1.22	0.49	4.57 1,186	0.50
R <sup>2</sup>	0.562	0.518	0.717	0.390
Panel D: Chile				
Altruism	0.159	$0.080^{*}$	0.212	0.004
Economic recovery	(0.124) -0.012	(0.041) 0.041	(0.246) 0.100	(0.052) 0.035
	(0.104)	(0.038)	(0.255)	(0.053)
Social approval	0.187* (0.113)	0.148*** (0.048)	0.836** (0.342)	0.079 (0.051)
	()		()	()
Outcome range Control outcome mean	[1,5] 2.97	{0,1} 0.30	[1,12] 4.81	{0,1} 0.49
Control outcome std. dev.	1.15	0.46	4.37	0.50
Observations R <sup>2</sup>	1,109	1,109 0.490	1,101	1,076
-	0.479	0.490	0.746	0.379
Panel E: Colombia Altruism	-0.067	-0.019	0.562**	0.025
	(0.111)	(0.041)	(0.225)	(0.047)
Economic recovery	0.019 (0.106)	-0.016 (0.045)	-0.080 (0.202)	-0.003 (0.049)
Social approval	$0.210^{*}$	0.052	0.399	0.073
	(0.115)	(0.047)	(0.277)	(0.052)
Outcome range	[1,5]	$\{0,1\}$	[1,12]	$\{0,1\}$
Control outcome mean	3.18 1.25	0.42 0.49	6.15 4.62	0.55
Control outcome std. dev. Observations	1,130	1,130	1,119	1,084
$R^2$	0.461	0.465	0.780	0.360
Panel F: México	0.000	0.010	0.000	0.011
Altruism	-0.032 (0.123)	-0.013 (0.061)	0.099 (0.254)	0.011 (0.070)
Economic recovery	-0.125	-0.034	-0.109	0.047
Social approval	(0.120) 0.018	(0.054) -0.029	(0.356) 0.123	(0.058) 0.037
	(0.117)	(0.057)	(0.301)	(0.060)
Outcome range	[1,5]	{0,1}	[1,12]	{0,1}
Control outcome mean	3.64	0.59	7.51	0.66
Control outcome std. dev.	1.07	0.49	3.70	0.48
Observations R <sup>2</sup>	1,098 0.373	1,098 0.415	1,094 0.651	1,071 0.275
Panel G: Perú				
Altruism	-0.002	0.016	$-0.961^{***}$	-0.095
Economic recovery	(0.124) 0.071	(0.052) 0.022	(0.362) $-0.910^{***}$	(0.062) -0.010
	(0.113)	(0.049)	(0.290)	(0.056)
Social approval	0.131 (0.123)	0.071 (0.056)	-0.456 (0.373)	0.025 (0.057)
	(0.120)	(0.000)	(0.373)	(0.001)
Outcome range	[1,5]	{0,1}	[1,12]	{0,1}
Control outcome mean Control outcome std. dev.	3.08 1.10	0.37 0.48	6.73 4.25	0.59 0.49
Observations	1,217	1,217	1,201	1,162
$R^2$	0.368	0.399	0.685	0.308

Table S32: Effect of different types of motivational message on vaccine willingness, using population cell weights. All specifications include country × block fixed effects and (standardized) pre-treatment wait until vaccination as covariates (omitted to save space), weight observations by population weights, and are estimated using OLS. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

		Outco	me variable:	
			Months would	
	Vaccine	Willing	wait to get	Encourage
	willingness	to take a	vaccinated	others to ge
	scale	vaccine	(reversed)	vaccinated
	(1)	(2)	(3)	(4)
Panel A: All countries po		. ,		. ,
Any vaccine information	0.168***	0.051***	0.347***	0.020
	(0.039)	(0.016)	(0.099)	(0.020)
<b>A</b> .	(1.5)	(0.1)	(1.10)	(0.1)
Outcome range Control outcome mean	[1,5] 3.17	$\{0,1\}$ 0.41	[1,12] 6.02	$\{0,1\}$ 0.54
Control outcome std. dev.	1.19	0.41	4.33	0.54
Observations	6,803	6,803	6,732	6,519
$R^2$	0,496	0.510	0.768	0,319
	0.490	0.510	0.708	0.311
Panel B: Argentina	0.253**	0.058	0.405**	0.089**
Any vaccine information				
	(0.103)	(0.039)	(0.197)	(0.041)
Outcome range	[1,5]	$\{0,1\}$	[1,12]	$\{0,1\}$
Control outcome mean	2.92	0.35	5.06	0.43
Control outcome std. dev.	1.22	0.48	4.46	0.49
Observations	1,130	1,130	1,120	1,081
$R^2$	0.473	0.498	0.834	0.440
	0.110	0.100	0.001	0.110
Panel C: Brazil Any vaccine information	0.233***	0.092***	$0.392^{*}$	0.003
rany vaccine information				(0.003)
	(0.072)	(0.033)	(0.214)	(0.050)
Outcome range	[1,5]	$\{0,1\}$	[1,12]	$\{0,1\}$
Control outcome mean	3.24	0.40	5.93	0.49
Control outcome std. dev.	1.17	0.49	4.39	0.50
Observations	1.195	1.195	1.172	1,119
$R^2$	0.560	0.515	0.728	0.403
	0.500	0.010	0.120	0.403
Panel D: Chile	0.194	0.064*	0.473**	0.051
Any vaccine information	0.134	0.00.		0.051
	(0.084)	(0.035)	(0.201)	(0.041)
Outcome range	[1,5]	$\{0,1\}$	[1,12]	$\{0,1\}$
Control outcome mean	2.91	0.31	4.83	0.46
Control outcome std. dev.	1.21	0.46	4.42	0.50
Observations	1,085	1,085	1,077	1,052
$R^2$	0.500	0.472	0.785	0.337
	0.300	0.472	0.785	0.557
Panel E: Colombia	0.100*	0.000**	0.000***	0.054
Any vaccine information	$0.138^{*}$	0.060**	0.360***	0.054
	(0.073)	(0.029)	(0.131)	(0.039)
Outcome range	[1,5]	$\{0,1\}$	[1,12]	$\{0,1\}$
Control outcome mean	3.17	0.39	6.19	0.54
Control outcome std. dev.	1.24	0.49	4.23	0.54
Observations	1,109	1,109	1,098	1,063
$R^2$	0.509	0.543	0.839	0.417
Panel F: México				
Any vaccine information	0.160	0.032	0.183	-0.058
, secone mormaton	(0.112)	(0.032)	(0.288)	(0.057)
	()	(0.0)	()	()
Outcome range	[1,5]	$\{0,1\}$	[1,12]	$\{0,1\}$
Control outcome mean	3.51	0.54	7.30	0.70
Control outcome std. dev.	1.15	0.50	3.89	0.46
Observations	1,072	1,072	1,069	1,046
$R^2$	0.467	0.542	0.715	0.347
Panel G: Perú				
Any vaccine information	0.096	0.017	0.371	0.039
	(0.078)	(0.036)	(0.237)	(0.033)
	(0.010)	(0.000)	(0.201)	(0.042)
Outcome range	[1,5]	$\{0,1\}$	[1,12]	$\{0,1\}$
Control outcome mean	3.11	0.40	6.08	0.55
Control outcome std. dev.	1.04	0.49	4.27	0.50
	1,212	1,212	1,196	1,158
Observations				

Table S33: Effect of any vaccine information on vaccine willingness, using population rake weights. All specifications include country × block fixed effects and (standardized) pretreatment wait until vaccination as covariates (omitted to save space), weight observations by the inverse probability of treatment assignment and population rake weights, and are estimated using OLS. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

		Outco	me variable: Months would	
	Vaccine willingness scale (1)	Willing to take a vaccine (2)	wait to get vaccinated (reversed) (3)	Encourage others to get vaccinated (4)
Vaccine	0.113*	0.042*	0.388***	0.051**
	(0.058)	(0.023)	(0.143)	(0.025)
Vaccine + Biden	$0.179^{***}$	$0.048^{*}$	0.165	-0.008
	(0.063)	(0.026)	(0.179)	(0.035)
Vaccine + Herd 60%	$0.121^{*}$	0.043	0.115	0.012
	(0.070)	(0.037)	(0.173)	(0.040)
Vaccine + Herd 70%	$0.177^{**}$	$0.063^{*}$	$0.560^{***}$	0.042
	(0.070)	(0.033)	(0.208)	(0.034)
Vaccine + Herd 80%	$0.182^{***}$	$0.053^{*}$	0.166	-0.028
	(0.068)	(0.029)	(0.157)	(0.037)
Vaccine + Herd 60% + Current	$0.184^{***}$	$0.068^{**}$	0.330	0.083***
	(0.065)	(0.030)	(0.208)	(0.032)
Vaccine + Herd 70% + Current	$0.175^{**}$	$0.062^{**}$	$0.403^{**}$	0.057
	(0.070)	(0.031)	(0.174)	(0.036)
Vaccine + Herd 80% + Current	$0.182^{**}$	0.038	$0.592^{***}$	-0.004
	(0.079)	(0.029)	(0.221)	(0.034)
Outcome range	[1,5]	$\{0,1\}$	[1,12]	{0,1}
Control outcome mean	3.17	0.41	6.02	0.54
Control outcome std. dev.	1.19	0.49	4.33	0.50
Observations	6,803	6,803	6,732	6,519
$R^2$	0.455	0.457	0.725	0.357

Table S34: Effect of different types of vaccine information on vaccine willingness, using population rake weights. All specifications include country × block fixed effects and (standardized) pre-treatment wait until vaccination as covariates (omitted to save space), weight observations by the inverse probability of treatment assignment and population rake weights, and are estimated using OLS. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

	Outcome variable: Months would							
	Vaccine willingness scale (1)	Willing to take a vaccine (2)	wait to get vaccinated (reversed) (3)	Encourage others to get vaccinated (4)				
Current	0.076	0.066	0.295	0.066				
	(0.081)	(0.042)	(0.220)	(0.046)				
Current rate below herd opinion	0.054	0.043	0.165	-0.006				
	(0.074)	(0.039)	(0.177)	(0.048)				
Current $\times$ Current rate	-0.084	$-0.093^{*}$	-0.243	-0.066				
below herd opinion	(0.103)	(0.052)	(0.267)	(0.059)				
Outcome range	[1,5]	$\{0,1\}$	[0,12]	$\{0,1\}$				
Control outcome mean	3.37	0.48	6.32	0.53				
Control outcome std. dev.	1.14	0.50	4.3	0.50				
Observations	2,899	2,899	2,865	2,770				
$R^2$	0.508	0.483	0.724	0.403				

Table S35: The effect of being informed that the current rate of vaccination willingness in the population is above/below the rate required for herd immunity, using population rake weights. All specifications include country × block fixed effects and (standardized) pretreatment wait until vaccination as covariates (omitted to save space), weight observations by the inverse probability of treatment assignment and population rake weights, and are estimated using OLS. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

		Outcor	ne variable:	
	Vaccine	Willing	Months would wait to get	Encourage
	willingness	to take a	vaccinated	others to g
	scale (1)	vaccine (2)	(reversed) (3)	vaccinated (4)
Panel A: All countries po	oled			
Altruism	0.016 (0.049)	-0.002 (0.021)	0.087 (0.117)	-0.011 (0.024)
Economic recovery	0.061	0.010	-0.017	0.051**
	(0.047)	(0.020)	(0.123)	(0.023)
Social approval	0.172*** (0.052)	$0.043^{**}$ (0.022)	0.297 <sup>**</sup> (0.140)	0.020 (0.024)
Outcome range Control outcome mean	[1,5] 3.24	{0,1} 0.43	[1,12] 6.28	$\{0,1\}$ 0.56
Control outcome std. dev.	3.24 1.17	0.45	4.39	0.50
Observations	6,803	6,803	6,732	6,519
$R^2$	0.452	0.466	0.737	0.348
Panel B: Argentina Altruism	-0.146	-0.073	0.080	-0.045
Auuuisin	(0.117)	(0.055)	(0.252)	(0.043)
Economic recovery	$0.239^{*}$	0.084	0.041	0.083
	(0.130)	(0.058)	(0.274) 0.163	(0.058)
Social approval	0.142 (0.123)	0.022 (0.058)	0.163 (0.282)	-0.006 (0.061)
	()	()	( )	()
Outcome range	[1,5] 3.07	$\{0,1\}$ 0.37	[1,12] 5.56	$\{0,1\}$ 0.48
Control outcome mean Control outcome std. dev.	3.07	0.37	5.56 4.42	0.48
Observations	1,130	1,130	1,120	1,081
R <sup>2</sup>	0.417	0.437	0.805	0.371
Panel C: Brazil				
Altruism	-0.115	-0.034	0.364	-0.021
Economic recovery	(0.085) 0.087	(0.038) 0.024	(0.261) 0.782***	(0.042) 0.035
	(0.075)	(0.034)	(0.237)	(0.042)
Social approval	$0.188^{**}$	$0.085^{**}$	1.111***	0.043
	(0.080)	(0.037)	(0.286)	(0.045)
Outcome range	[1,5]	{0,1}	[1.12]	{0.1}
Control outcome mean	3.31	0.41	5.45	0.46
Control outcome std. dev.	1.22	0.49	4.58	0.50
Observations $R^2$	1,195 0.559	1,195 0.523	1,172 0.693	1,119 0.377
Panel D: Chile	0.005	0.020	0.055	0.511
Altruism	0.148	$0.077^{*}$	0.089	0.025
	(0.110)	(0.043)	(0.248)	(0.052)
Economic recovery	0.094	0.068	0.210	0.080
Social approval	(0.112) 0.156	(0.044) $0.114^{**}$	(0.300) 0.628**	(0.052) 0.088*
	(0.103)	(0.045)	(0.312)	(0.051)
Outcome range	[1,5]	{0,1}	[1,12]	$\{0,1\}$
Control outcome mean	3.01	0.32	5.11	0.49
Control outcome std. dev.	1.16	0.47	4.49	0.50
Observations $R^2$	1,085	1,085	1,077	1,052
	0.456	0.447	0.733	0.313
Panel E: Colombia Altruism	-0.003	0.028	0.676***	0.050
Aluuisin	(0.108)	(0.042)	(0.210)	(0.047)
Economic recovery	0.037	0.015	0.034	0.039
0	(0.094)	(0.038)	(0.185)	(0.046)
Social approval	0.133 (0.094)	0.027 (0.039)	0.259 (0.247)	0.059 (0.049)
Outcome range	1-5	0-1	0-12	0-1
Control outcome mean	3.26	0.42	6.36	0.56
Control outcome std. dev.	1.20	0.49	4.49	0.50
Observations $R^2$	1,109 0.458	1,109 0.480	1,098 0.791	1,063 0.360
Panel F: México				0.000
Altruism	0.172	0.010	0.249	0.003
	(0.139)	(0.061)	(0.283)	(0.071)
Economic recovery	-0.065 (0.130)	-0.069 (0.053)	-0.137 (0.346)	0.038 (0.063)
Social approval	$0.285^{*}$	0.020	(0.346) 0.387	-0.049
	(0.150)	(0.058)	(0.350)	(0.063)
Outcome range	[1.5]	{0.1}	[1.12]	{0.1}
Control outcome mean	3.49	0.59	7.55	0.70
Control outcome std. dev.	1.20	0.49	3.81	0.46
Observations	1,072	1,072	1,069	1,046
R <sup>2</sup>	0.433	0.499	0.721	0.364
Panel G: Perú Altruism	-0.057	-0.024	$-1.044^{***}$	-0.075
rau di Sili	-0.057 (0.107)	-0.024 (0.051)	(0.364)	-0.075 (0.057)
Economic recovery	0.034	-0.020	$-1.014^{***}$	0.043
	(0.095)	(0.049)	(0.326)	(0.054)
Social approval	0.041 (0.109)	0.006 (0.052)	-0.818** (0.390)	0.050 (0.056)
			()	
Outcome range	[1,5]	$\{0,1\}$	[1,12]	$\{0,1\}$
		0.40	6.95	0.57
Control outcome mean	3.14			
Control outcome mean Control outcome std. dev. Observations	3.14 1.09 1,212	0.40 0.49 1,212	4.20 1,196	0.50 1,158

Table S36: Effect of different types of motivational message on vaccine willingness, using population rake weights. All specifications include country × block fixed effects and (standardized) pre-treatment wait until vaccination as covariates (omitted to save space), weight observations by population rake weights, and are estimated using OLS. Robust standard errors are in parentheses. \* denotes p < 0.1, \*\* denotes p < 0.05, \*\*\* denotes p < 0.01 from two-sided t tests.

# S18 Full survey questionnaire

Below we include the full survey instrument in Spanish. The Portuguese translation is available upon request. English translations for the information treatment conditions, motivation treatment conditions, and main outcome variables are, respectively, provided in sections S2, ??, and S5.

### COLUMBIA UNIVERSITY Institute for Social and Economic Research and Policy

### Introduction

¡Hola!

Nos gustaría invitarlo a **participar en una encuesta para entender qué piensa la gente sobre la pandemia COVID-19**. Este estudio está siendo liderado por un grupo de investigadores de la Universidad de Columbia, Estados Unidos. Si usted desea participar, la encuesta le tomará aproximadamente **20 minutos**.

Su participación en el estudio es voluntaria. Además, una vez que termine la encuesta, la empresa Netquest lo recompensará. Sus respuestas se mantendrán estrictamente confidenciales. Usted puede terminar la encuesta en cualquier momento.

En caso de que tenga cualquier pregunta, duda, queja o comentario sobre este estudio, por favor contacte a John Marshall de la Universidad de Columbia, cuyo correo electrónico es jm4401@columbia.edu. Si tiene preguntas sobre sus derechos como sujeto de investigación, puede contactar al Comité de Ética Institucional de la Universidad de Columbia en el teléfono número +1 212 305 5883 o por correo electrónico askirboffice@columbia.edu.

### Si desea participar en este estudio, haga click en el botón a continuación.

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### Screening/willingness questions

¿Hasta qué punto está usted de acuerdo o en desacuerdo?

Si una vacuna contra el COVID-19 estuviera disponible, yo me vacunaría.

- O Muy en desacuerdo
- O En desacuerdo
- Ni de acuerdo ni en desacuerdo
- O De acuerdo
- O Muy de acuerdo
- O No estoy seguro

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Si una vacuna contra el COVID-19 estuviera disponible para usted ahora, ¿cuántos meses esperaría antes de vacunarse?

Numero de meses:

O Nunca tomaría una vacuna

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https://columbiaiserp.col.qualtrics.com/Q/EditSection/Blocks/Ajax/Get... Qualtrics Survey Software Si una vacuna contra el COVID-19 estuviera disponible para todos ahora, ¿aproximadamente qué porcentaje de personas de su municipio piensa que se vacunarían? 0 25 75 100 50 These page timer metrics will not be displayed to the recipient. First Click: 0 seconds Last Click: 0 seconds Page Submit: 0 seconds Click Count: 0 clicks Si una vacuna contra el COVID-19 estuviera disponible para todos ahora, ¿aproximadamente qué porcentaje de personas de su municipio piensa que se vacunarían durante los primeros dos meses de su disponibilidad? 0 25 50 75 100 These page timer metrics will not be displayed to the recipient. First Click: 0 seconds Last Click: 0 seconds Page Submit: 0 seconds Click Count: 0 clicks **Quota questions** ¿Cuál es su edad? (años cumplidos) ¿En qué municipio vive usted? Estado /

Municipio

			$\sim$
[	$\sim$		

3 of 49

https://columbiaiserp.col.qualtrics.com/Q/EditSection/Blocks/Ajax/Get...

¿Cuál fue el último año de enseñanza que usted completó o aprobó?

Nivel de educación

Años completados o aprobados en este nivel

	$\sim$
$\sim$	

¿Cuál es su género?

- O Femenino
- O Masculino
- O Otro

### **Background and attention questions**

¿Su hogar tiene electricidad, agua corriente, o drenaje? Seleccione todas las que correspondan.

- Drenaje
- Electricidad
- Agua Corriente
- Ninguna

¿Cuál es su religión?

- O Católico
- O Protestante, Protestante Tradicional, o Protestante no Evangélico
- O Evangélico o Pentecostal
- 🔘 Islam
- O Hinduista
- O Budista
- O Religiones Tradicionales o Nativas
- O Ninguna
- Agnóstico o ateo
- O Otra:

¿Cuál es la ciudad capital de \${e://Field/country}?

- O Brasília
- O Santiago
- O Bogotá
- O Buenos Aires
- 🔘 Lima
- O Ciudad de México

### **Pre-treatment questions**

¿Con qué frecuencia consume noticias sobre COVID-19 de las siguientes fuentes?

	Nunca	Una vez cada dos meses	Una vez al mes	Una vez cada dos semanas	Una vez por semana	Varias veces por semana	Diariamente
Periódicos	0	0	0	0	0	0	0
Televisión	0	0	0	0	0	0	0
Radio	0	0	0	0	0	0	0
Conversaciones con otros	0	0	0	0	0	0	0
WhatsApp	0	0	0	0	0	0	0
Redes sociales (e.j. Facebook, Twitter)	0	0	0	0	0	0	0
Sitios web de noticias	0	0	0	0	0	0	0

En su opinión, ¿qué tan serio es el tema del COVID-19 en \${e://Field/country}?

- O Nada serio
- O Poco serio
- O Algo serio
- O Muy serio
- 🔿 No sé

Pensando en COVID-19, ¿qué tema le preocupa más?

- O No poder educar a los jóvenes
- O Salud mental
- O Impacto económico
- O Salud física
- O Impacto político
- O No estoy preocupado por el COVID-19
- O No sé

Para que el COVID-19 pare de propagarse, ¿qué porcentaje de personas piensa que necesita vacunarse?

	0	25	50	75	100				
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Last Click: 0	seconds								
Page Submit	: 0 seconds								
Click Count:	0 clicks								

¿Hasta qué punto está usted de acuerdo o en desacuerdo con las siguientes declaraciones?

	Muy en desacuerdo	En desacuerdo	Ni de acuerdo ni en desacuerdo	De acuerdo	Muy de acuerdo
Confío en que expertos médicos internacionales desarrollen vacunas seguras y eficaces.	0	0	0	0	0
Vacunarme es una buena manera para protegerme de enfermedades.	0	0	0	0	0
Confío que el gobierno determine si las vacunas son seguras y eficaces.	0	0	0	0	0
Vacunarme contra enfermedades que pueden ser graves es importante para la salud de los demás en mi comunidad.	0	0	0	0	0
Generalmente, sigo las indicaciones de mi médico sobre vacunaciones.	0	0	0	0	0

¿Alguna vez ha rechazado una vacuna recomendada para usted o sus hijos?

- O<sub>No</sub>
- O Sí
- 🔘 No sé
- O Prefiero no decir
- O No aplica

¿Cuáles de las siguentes opciones describe por qué duda en tomar una vacuna en contra del COVID-19? Seleccione todas las que correspondan.

- Ya tuve COVID-19
- Temo que las vacunas están siendo desarolladas demasiado rápido
- Mi riesgo de contraer el COVID-19 es tan bajo que no necesito la vacuna
- Estoy preocupado por los efectos secundarios
- No creo que las vacunas sean efectivas contra el COVID-19
- No confió en el gobierno
- Temo que la vacuna me dará COVID-19
- Prefiero adquirir inmunidad tras contraer COVID-19, sin necesidad de una vacuna
- Temo que no podré pagar una vacuna para el COVID-19
- Estoy en contra de las vacunas
- Otra:

¿Sufre de algunas de las siguientes enfermedades crónicas? Seleccione todas las que correspondan.

- Ninguna
- Enfermedades cardiovasculares
- Enfermedades autoinmunes
- Diabetes
- Enfermedad pulmonar obstructiva crónica
- Obesidad
- Prefiero no decir

### ¿Ha sido diagnosticado con COVID-19?

- O No, nunca he sido diagnosticado con COVID-19
- O Sí, actualmente tengo COVID-19
- Sí, he tenido COVID-19 en el pasado
- O Prefiero no decir

¿Conoce a alguien que se enfermó gravemente o falleció debido a COVID-19?

- O<sub>No</sub>
- 🔿 Sí
- O No sé

¿Considera usted que su situación económica personal es peor, igual, o mejor que antes de la pandemia?

- O Mucho peor
- O Peor
- O Igual
- O Mejor
- Mucho mejor
- 🔿 No sé

En su opinión, ¿cuán prioritario es para el gobierno distribuir una vacuna en su municipio?

- O No es una prioridad
- O Una prioridad baja
- O Una prioridad media
- O Una prioridad alta
- O Una máxima prioridad

O No sé

Hoy en día cuando se habla de **tendencias políticas**, mucha gente habla de aquellos que simpatizan más con la izquierda o con la derecha. Según el sentido que tengan para usted los términos "izquierda" y "derecha" cuando piensa sobre su punto de vista político, ¿dónde se encontraría usted en esta escala?

0 (extrema					5					10 (extrema
izquierda)	1	2	3	4	(centro)	6	7	8	9	derecha)
0	0	0	0	0	0	0	0	0	0	0

Con respecto al manejo de la pandemia, ¿qué tan satisfecho está usted con las siguientes autoridades?

	Nada satisfecho	No satisfecho	Ni satisfecho ni insatisfecho	Satisfecho	Muy satisfecho
Presidente \${e://Field /president}	0	0	0	0	0
\${e://Field /health_ministry}	0	0	0	0	0
\${e://Field /mayor_gender} de su municipalidad	0	0	0	0	0

Si hubiese una **elección presidencial** mañana, ¿votaría usted a favor del partido o alguien de la coalición del Presidente \${e://Field/president}?

O No, votaría por un candidato de la oposición

O Sí

O No votaría

O No sé

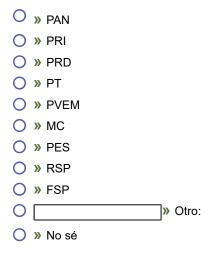
¿Por cuál partido de la oposición votaría en una elección presidencial?

PAN
PRI
PRD
PT
PVEM
MC
PES
RSP
FSP
Otro:
No sé

Si la **elección para \${e://Field/mayor} en su municipio** fuese mañana, ¿votaría usted a favor del partido o alguien de la coalición del actual \${e://Field/mayor}?

- O » Sí
- » No, votaría por un candidato de la oposición
- No votaría
- 🔘 » No sé

¿Por cuál partido de la oposición votaría en las elecciones locales (o en la elección para \${e://Field/mayor})?



¿Cuánta confianza tiene en las siguientes personas e instituciones?

	Nada de confianza	Poca confianza	Algo de confianza	Mucha confianza	No sé
Presidente \${e://Field /president}	0	0	0	0	0
\${e://Field /mayor_gender_2} de mi municipio	0	0	0	0	0
\${e://Field /health_ministry}	0	0	0	0	0
\${e://Field /medical_association}	0	0	0	0	0
\${e://Field /left_newspaper}	0	0	0	0	0
\${e://Field /right_newspaper}	0	0	0	0	0
\${e://Field /religious_leader}	0	0	0	0	0

	Nada de confianza	Poca confianza	Algo de confianza	Mucha confianza	No sé
Sus profesionales locales de salud	0	0	0	0	0
Organizaciones de la sociedad civil	0	0	0	0	0
Las fuerzas armadas de \${e://Field/country}	0	0	0	0	0

¿Cuánta confianza tiene en las siguientes instituciones y organizaciones?

¿Cuánta confianza tiene en los gobiernos actuales de los siguientes países?

	Nada de confianza	Poca confianza	Algo de confianza	Mucha confianza	No sé
China	0	0	0	0	0
Estados Unidos bajo Donald Trump	0	0	0	0	0
Estados Unidos bajo Joe Biden	0	0	0	0	0
Reino Unido	0	0	0	0	0
Rusia	0	0	0	0	0

¿Hasta qué punto cree usted que reunirse con personas fuera de su familia, en lugares cerrados, contribuye a propagar el COVID-19?

O Nada

O Un poco

O Algo

O Mucho

🔘 No sé

Haga de cuenta que usted tiene la posibilidad de lanzar una moneda justa. Si la moneda cae en cara, obtendrá \${e://Field/risk\_currency}. Si no, obtendrá 0 \${e://Field /currency}. Eso significa que tiene una probabilidad del 50% de obtener los \${e://Field /risk\_currency} y una probabilidad del 50% de obtener nada. ¿Qué prefiere: tomar el riesgo, o recibir una cantidad segura? Seleccione una respuesta para cada una de las opciones.

	Tomar el riesgo	Tomar el dinero seguro
Tomar el riesgo de recibir \${e://Field/risk_currency} con una probabilidad del 50% <b>o recibir \${e://Field/sure_1_currency}</b> asegurados	0	0
Tomar el riesgo de recibir \${e://Field/risk_currency} con una probabilidad del 50% <b>o \${e://Field/sure_2_currency} asegurados</b>	0	0
Tomar el riesgo de recibir \${e://Field/risk_currency} con una probabilidad del 50% <b>o \${e://Field/sure_3_currency} asegurados</b>	0	0
Tomar el riesgo de recibir \${e://Field/risk_currency} con una probabilidad del 50% <b>o \${e://Field/sure_4_currency} asegurados</b>	0	0
Tomar el riesgo de recibir \${e://Field/risk_currency} con una probabilidad del 50% <b>o \${e://Field/sure_5_currency} asegurados</b>	0	0

Haga de cuenta que usted tiene la posibilidad de obtener \${e://Field/sure\_1\_currency} en este momento, o una cantidad superior dentro de un año. ¿Qué prefiere recibir: los \${e://Field/sure\_1\_currency} en este momento o la cantidad superior en un año? Seleccione una respuesta para cada una de las opciones.

	De Acuerdo	En Desacuerdo
Prefiero \${e://Field/sure_1_currency} en este momento a \${e://Field /discount_1_currency} dentro de un año	0	0
Prefiero \${e://Field/sure_1_currency} en este momento a \${e://Field /discount_2_currency} dentro de un año	0	0
Prefiero \${e://Field/sure_1_currency} en este momento a \${e://Field /discount_3_currency} dentro de un año	0	0
Prefiero \${e://Field/sure_1_currency} en este momento a \${e://Field /discount_4_currency} dentro de un año	0	0

Suponga que a usted le dan \${e://Field/sure\_1\_currency} y tiene que decidir cuanta

plata donar a una familia con necesidad en su comunidad. ¿Cuánto de esos \${e://Field /sure\_1\_currency} donaría a esta familia?



¿Qué tan importante para usted es recibir el respeto y el reconocimiento de otros en su comunidad?

- O Nada importante
- O Poco importante
- Algo importante
- O Muy importante

¿Cuánta influencia cree usted que tiene con otras personas de su comunidad?

- O Nada de influencia
- Poca influencia
- Algo de influencia
- O Mucha influencia

### Information treatment T0 - Control

Los países de Latinoamérica están comenzando a distribuir sus primeras dosis de vacunas.

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#### Information treatment T1 - Health only

Los países de Latinoamerica están comenzando a distribuir sus primeras dosis de vacunas.

La siguiente pantalla proporcionará **información importante sobre estas vacunas** contra el COVID-19.

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Las vacunas están diseñadas para prevenir enfermedades.

Después de **pruebas exhaustivas realizadas por expertos médicos**, se ha aprobado el uso de varias vacunas contra el COVID-19 en diferentes países.

Las pruebas clínicas han demonstrado que las vacunas son **seguras y altamente** eficaces en prevenir infecciones leves y graves de COVID-19. Los efectos secundarios son generalmente menores y no se puede contraer COVID-19 de una vacuna.

¿Cuáles de las siguientes afirmaciones son **ciertas** sobre las vacunas nuevas contra el COVID-19? Seleccione todas las que correspondan.

- □ Ningún país ha aprobado el uso de vacunas contra el COVID-19
- No se sabe si hay efectos secundarios graves de tomar una vacuna contra el COVID-19
- No es posible contraer COVID-19 de una vacuna
- Las pruebas muestran que las vacunas son altamente eficaces en prevenir infecciones de COVID-19
- Las vacunas se han sometido a exhaustivas pruebas clínicas
- Ninguno de los anteriores

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#### Information treatment T2 - Health and herd 60%

Los países de Latinoamerica están comenzando a distribuir sus primeras dosis de vacunas.

La siguiente pantalla proporcionará **información importante sobre estas vacunas** contra el COVID-19.

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Las vacunas están diseñadas para prevenir enfermedades.

Después de **pruebas exhaustivas realizadas por expertos médicos**, se ha aprobado el uso de varias vacunas contra el COVID-19 en diferentes países.

Las pruebas clínicas han demonstrado que las vacunas son **seguras y altamente** eficaces en prevenir infecciones leves y graves de COVID-19. Los efectos secundarios son generalmente menores y no se puede contraer COVID-19 de una vacuna.

¿Cuáles de las siguientes afirmaciones son <b>ciertas</b> sobre las vacunas nuevas contra el
COVID-19? Seleccione todas las que correspondan.

- □ Ningún país ha aprobado el uso de vacunas contra el COVID-19
- Las pruebas muestran que las vacunas son altamente eficaces en prevenir infecciones de COVID-19
- No es posible contraer COVID-19 de una vacuna
- Las vacunas se han sometido a exhaustivas pruebas clínicas
- No se sabe si hay efectos secundarios graves de tomar una vacuna contra el COVID-19
- Ninguno de los anteriores

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Si suficientes personas se vacunan contra el COVID-19, el Coronavirus dejará de propagararse.

Algunos expertos dicen que al menos 60% de las personas necesitan vacunarse para evitar la propagación del Coronavirus.

¿Es cierto que algunos expertos dicen que al menos 60% de las personas necesitarán vacunarse para evitar la propagación del COVID-19?

- O Es cierto
- Es falso
- O No sé

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#### Information treatment T3 - Health and herd 70%

Los países de Latinoamerica están comenzando a distribuir sus primeras dosis de vacunas.

La siguiente pantalla proporcionará **información importante sobre estas vacunas** contra el COVID-19.

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Las vacunas están diseñadas para prevenir enfermedades.

Después de **pruebas exhaustivas realizadas por expertos médicos**, se ha aprobado el uso de varias vacunas contra el COVID-19 en diferentes países.

Las pruebas clínicas han demonstrado que las vacunas son **seguras y altamente** eficaces en prevenir infecciones leves y graves de COVID-19. Los efectos secundarios son generalmente menores y no se puede contraer COVID-19 de una vacuna.

έC	uáles de las siguientes afirmaciones son <b>ciertas</b> sobre las vacunas nuevas contra e
-	VID-19? Seleccione todas las que correspondan.
	Las pruebas muestran que las vacunas son altamente eficaces en prevenir infecciones de COVID-19
	No se sabe si hay efectos secundarios graves de tomar una vacuna contra el COVID-19
	No es posible contraer COVID-19 de una vacuna
C	Ningún país ha aprobado el uso de vacunas contra el COVID-19
	Las vacunas se han sometido a exhaustivas pruebas clínicas
C	Ninguno de los anteriores
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Si suficientes personas se vacunan contra el COVID-19, el Coronavirus dejará de propagararse.

Algunos expertos dicen que al menos 70% de las personas necesitan vacunarse para evitar la propagación del Coronavirus.

¿Es cierto que algunos expertos dicen que al menos 70% de las personas necesitarán vacunarse para evitar la propagación del COVID-19?

- O Es cierto
- O Es falso
- O No sé

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#### Information treatment T4 - Health and herd 80%

Los países de Latinoamerica están comenzando a distribuir sus primeras dosis de vacunas.

La siguiente pantalla proporcionará **información importante sobre estas vacunas** contra el COVID-19.

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Las vacunas están diseñadas para prevenir enfermedades.

Después de **pruebas exhaustivas realizadas por expertos médicos**, se ha aprobado el uso de varias vacunas contra el COVID-19 en diferentes países.

Las pruebas clínicas han demonstrado que las vacunas son **seguras y altamente** eficaces en prevenir infecciones leves y graves de COVID-19. Los efectos secundarios son generalmente menores y no se puede contraer COVID-19 de una vacuna. ¿Cuáles de las siguientes afirmaciones son **ciertas** sobre las vacunas nuevas contra el COVID-19? Seleccione todas las que correspondan.

- □ Ningún país ha aprobado el uso de vacunas contra el COVID-19
- No es posible contraer COVID-19 de una vacuna
- No se sabe si hay efectos secundarios graves de tomar una vacuna contra el COVID-19
- Las vacunas se han sometido a exhaustivas pruebas clínicas
- Las pruebas muestran que las vacunas son altamente eficaces en prevenir infecciones de COVID-19
- Ninguno de los anteriores

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Si suficientes personas se vacunan contra el COVID-19, el Coronavirus dejará de propagararse.

Algunos expertos dicen que al menos 80% de las personas necesitan vacunarse para evitar la propagación del Coronavirus.

¿Es cierto que algunos expertos dicen que al menos 80% de las personas necesitarán vacunarse para evitar la propagación del COVID-19?

- O Es cierto
- Es falso
- O No sé

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#### Information treatment T5 - Health and herd 60% and current level

Los países de Latinoamerica están comenzando a distribuir sus primeras dosis de vacunas.

La siguiente pantalla proporcionará **información importante sobre estas vacunas** contra el COVID-19.

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Las vacunas están diseñadas para prevenir enfermedades.

Después de **pruebas exhaustivas realizadas por expertos médicos**, se ha aprobado el uso de varias vacunas contra el COVID-19 en diferentes países.

Las pruebas clínicas han demonstrado que las vacunas son **seguras y altamente** eficaces en prevenir infecciones leves y graves de COVID-19. Los efectos secundarios son generalmente menores y no se puede contraer COVID-19 de una vacuna.

¿Cuáles de las siguie	entes afirmaciones son <b>ciertas</b> sobre las vacunas nuevas contra el
COVID-19? Seleccio	ne todas las que correspondan.
Las vacunas se ha	an sometido a exhaustivas pruebas clínicas
No se sabe si hay COVID-19	efectos secundarios graves de tomar una vacuna contra el
Las pruebas mues infecciones de CC	stran que las vacunas son altamente eficaces en prevenir )VID-19
No es posible con	traer COVID-19 de una vacuna
🔲 Ningún país ha ap	probado el uso de vacunas contra el COVID-19
🔲 Ninguno de los an	teriores

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Si suficientes personas se vacunan contra el COVID-19, el Coronavirus dejará de propagarse.

Algunos expertos dicen que al menos 60% de las personas necesitan vacunarse para evitar la propagación del Coronavirus.

Datos recientes indican que **\${e://Field/current\_willingness} de las personas en \${e://Field/country} actualmente dicen que se vacunarían** contra el COVID-19. En \${e://Field/country}, ¿están más o menos personas dispuestas a tomar una vacuna que el 60% de las personas que algunos expertos dicen que necesitarán tomar la vacuna para evitar la propagación del COVID-19?

- O Más del 60% están dispuestos a tomar una vacuna
- O Menos del 60% están dispuestos a tomar una vacuna
- O No sé

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#### Information treatment T6 - Health and herd 70% and current level

Los países de Latinoamerica están comenzando a distribuir sus primeras dosis de vacunas.

La siguiente pantalla proporcionará **información importante sobre estas vacunas** contra el COVID-19.

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Las vacunas están diseñadas para prevenir enfermedades.

Después de **pruebas exhaustivas realizadas por expertos médicos**, se ha aprobado el uso de varias vacunas contra el COVID-19 en diferentes países.

Las pruebas clínicas han demonstrado que las vacunas son seguras y altamente

25 of 49

eficaces en prevenir infecciones leves y graves de COVID-19. Los efectos secundarios son generalmente menores y no se puede contraer COVID-19 de una vacuna.

¿Cuáles de las siguientes afirmaciones son **ciertas** sobre las vacunas nuevas contra el COVID-19? Seleccione todas las que correspondan.

- Ningún país ha aprobado el uso de vacunas contra el COVID-19
- No es posible contraer COVID-19 de una vacuna
- Las pruebas muestran que las vacunas son altamente eficaces en prevenir infecciones de COVID-19
- No se sabe si hay efectos secundarios graves de tomar una vacuna contra el COVID-19
- Las vacunas se han sometido a exhaustivas pruebas clínicas
- Ninguno de los anteriores

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Si suficientes personas se vacunan contra el COVID-19, el Coronavirus dejará de propagarse.

Algunos expertos dicen que al menos 70% de las personas necesitan vacunarse para evitar la propagación del Coronavirus.

Datos recientes indican que **\${e://Field/current\_willingness} de las personas en \${e://Field/country} actualmente dicen que se vacunarían** contra el COVID-19.

En \${e://Field/country}, ¿están más o menos personas dispuestas a tomar una vacuna que el 70% de las personas que algunos expertos dicen que necesitarán tomar la vacuna para evitar la propagación del COVID-19?

- O Más del 70% están dispuestos a tomar una vacuna
- O Menos del 70% están dispuestos a tomar una vacuna
- O No sé

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#### Information treatment T7 - Health and herd 80% and current level

Los países de Latinoamerica están comenzando a distribuir sus primeras dosis de vacunas.

La siguiente pantalla proporcionará **información importante sobre estas vacunas** contra el COVID-19.

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Las vacunas están diseñadas para prevenir enfermedades.

Después de **pruebas exhaustivas realizadas por expertos médicos**, se ha aprobado el uso de varias vacunas contra el COVID-19 en diferentes países.

Las pruebas clínicas han demonstrado que las vacunas son seguras y altamente

27 of 49

eficaces en prevenir infecciones leves y graves de COVID-19. Los efectos secundarios son generalmente menores y no se puede contraer COVID-19 de una vacuna.

¿Cuáles de las siguientes afirmaciones son **ciertas** sobre las vacunas nuevas contra el COVID-19? Seleccione todas las que correspondan.

- Ningún país ha aprobado el uso de vacunas contra el COVID-19
- No es posible contraer COVID-19 de una vacuna
- Las pruebas muestran que las vacunas son altamente eficaces en prevenir infecciones de COVID-19
- No se sabe si hay efectos secundarios graves de tomar una vacuna contra el COVID-19
- Las vacunas se han sometido a exhaustivas pruebas clínicas
- Ninguno de los anteriores

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Si suficientes personas se vacunan contra el COVID-19, el Coronavirus dejará de propagarse.

Algunos expertos dicen que al menos 80% de las personas necesitan vacunarse para evitar la propagación del Coronavirus.

Datos recientes indican que **\${e://Field/current\_willingness} de las personas en \${e://Field/country} actualmente dicen que se vacunarían** contra el COVID-19.

En \${e://Field/country}, ¿están más o menos personas dispuestas a tomar una vacuna que el 80% de las personas que algunos expertos dicen que necesitarán tomar la vacuna para evitar la propagación del COVID-19?

- O Menos del 80% están dispuestos a tomar una vacuna
- O Más del 80% están dispuestos a tomar una vacuna
- 🔘 No sé

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#### Information treatment T8 - Health and Biden vaccinated

Los países de Latinoamerica están comenzando a distribuir sus primeras dosis de vacunas.

La siguiente pantalla proporcionará **información importante sobre estas vacunas** contra el COVID-19.

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Las vacunas están diseñadas para prevenir enfermedades.

Después de **pruebas exhaustivas realizadas por expertos médicos**, se ha aprobado el uso de varias vacunas contra el COVID-19 en diferentes países.

Las pruebas clínicas han demonstrado que las vacunas son seguras y altamente

29 of 49

eficaces en prevenir infecciones leves y graves de COVID-19. Los efectos secundarios son generalmente menores y no se puede contraer COVID-19 de una vacuna.

¿Cuáles de las siguientes afirmaciones son **ciertas** sobre las vacunas nuevas contra el COVID-19? Seleccione todas las que correspondan.

- Las vacunas se han sometido a exhaustivas pruebas clínicas
- No es posible contraer COVID-19 de una vacuna
- Ningún país ha aprobado el uso de vacunas contra el COVID-19
- Las pruebas muestran que las vacunas son altamente eficaces en prevenir infecciones de COVID-19
- No se sabe si hay efectos secundarios graves de tomar una vacuna contra el COVID-19
- Ninguno de los anteriores

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Hace algunas semanas, **el presidente Joe Biden recibió, de manera segura, una vacuna** contra el COVID-19 en los Estados Unidos.

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#### No motivation control M0

¿Se ha aprobado el uso de una vacuna contra el COVID-19 en algún país?

- O Sí
- O No
- O No sé

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### **Economic motivation M1**

Cuanto más rápido \${e://Field/country} pueda detener la propagación de COVID-19, más rápido las personas volverán a trabajar.

Si usted se vacuna contra el COVID-19, ayudará a que la economía se recupere.

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¿Se ha aprobado el uso de una vacuna contra el COVID-19 en algún país?

0	Sí
0	No

🔿 No sé

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#### Social incentive motivation M2

Vacunarse contra el COVID-19 demuestra que usted se preocupa por los demás en su comunidad.

Si usted se vacuna contra el COVID-19, será respetado por las personas en su comunidad.

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¿Se ha aprobado el uso de una vacuna contra el COVID-19 en algún país?

- O<sub>No</sub>
- 🔘 Sí

🔿 No sé

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#### **Altruism motivation M3**

Vacunarse contra el COVID-19 ayuda a detener la propagación del COVID-19 y así evita que los más vulnerables se enfermen.

Si usted se vacuna contra el COVID-19, ayudará a mantener saludables a otros en su comunidad.

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¿Se ha aprobado el uso de una vacuna contra el COVID-19 en algún país?

- O<sub>No</sub>
- O Sí
- 🔘 No sé

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#### **Treatment comprehension**

En las pruebas clínicas de las vacunas contra el COVID-19, ¿qué tipo de efectos secundarios han tenido los participantes generalmente?

- O No han tenido efectos secundarios
- O Efectos secundarios menores
- O Efectos secundarios graves
- 🔘 No sé

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Ahora nos gustaría reevaluar sus puntos de vista sobre tomar una vacuna contra el COVID-19.

#### **Response to treatment**

En base a la información que acaba de recibir, ¿se han contestado algunas de las dudas que tenía sobre las vacunas contra el COVID-19? Seleccione todas las que correspondan.

- ☐ Ya no pienso que mi riesgo de contraer el COVID-19 es tan bajo que no necesito la vacuna
- Aunque ya tuve COVID-19, ahora prefiero tomar una vacuna contra el COVID-19
- Ya no me preocupan los efectos secundarios
- Ya no prefiero adquirir inmunidad tras contraer COVID-19, sin necesidad de una vacuna
- Ahora confío en el gobierno
- Ya no temo que las vacunas se están siendo desarolladas demasiado rápido
- Ya no temo que la vacuna me dará COVID-19
- Ahora pienso que las vacunas son efectivas contra el COVID-19
- Ya no temo que no podré pagar una vacuna para el COVID-19

Otra:

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#### **Post-treatment questions**

34 of 49

¿Hasta qué punto está usted de acuerdo o en desacuerdo?

Si una vacuna contra el COVID-19 estuviera disponible, yo me vacunaría.

- O Muy en desacuerdo
- O En desacuerdo
- Ni de acuerdo ni en desacuerdo
- O De acuerdo
- O Muy de acuerdo
- O No estoy seguro

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Si una vacuna contra el COVID-19 estuviera disponible para usted ahora, ¿cuántos meses esperaría antes de vacunarse?

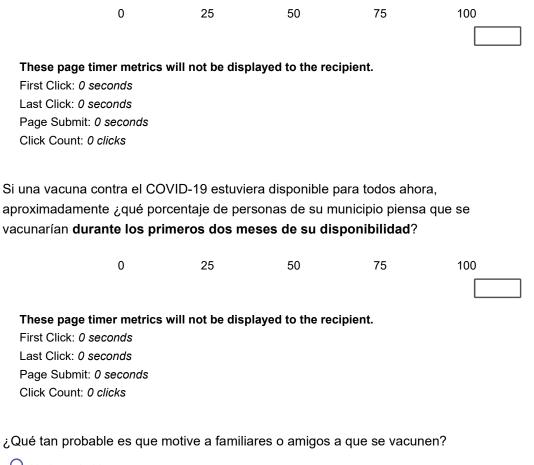
Numero de meses:

O Nunca tomaría una vacuna

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Si una vacuna contra el COVID-19 estuviera disponible para todos ahora, aproximadamente ¿qué porcentaje de personas de su municipio piensa que se vacunarían?



- O Nada probable
- Poco probable
- Algo probable
- Muy probable

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These page timer metrics will not be displayed to the recipient. First Click: 0 seconds Last Click: 0 seconds Page Submit: 0 seconds Click Count: 0 clicks Para que el COVID-19 pare de propagarse, ¿qué porcentaje de personas piensa que necesitan vacunarse? 0 25 50 75 These page timer metrics will not be displayed to the recipient. First Click: 0 seconds Last Click: 0 seconds Page Submit: 0 seconds Click Count: 0 clicks

¿Dentro de cuántos meses cree que las cosas regresarán a la normalidad en \${e://Field/country}?

Número de meses:

O Nunca regresarán a la normalidad

Si recibe la vacuna contra el COVID-19, ¿qué tan probable es que le diga a otros que usted se vacunó?

- O Nada probable
- O Poco probable
- Algo probable
- O Muy probable

¿Qué tan importante es para usted vacunarse para detener la propagación del virus en su comunidad?

- O Nada importante
- O Poco importante
- Algo importante
- O Muy importante

¿Qué tan importante es para usted vacunarse para ayudar a que todos puedan regresar a trabajar normalmente?

- O Nada importante
- O Poco importante
- Algo importante
- O Muy importante

### **Conjoint experiment 1**

A pesar que gente en varios países está empezando a recibir una vacuna contra el COVID-19, no habrá vacunación diponsible para todos hasta dentro de varios meses.

Además, todavía no se sabe qué vacunas estarán disponibles para la mayoría de la población.

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Por tanto, nos gustaría saber qué tan probable es que decida vacunarse en base a diferentes escenarios.

Lea atentamente toda la información sobre cada escenario antes de responder a las preguntas sobre ese escenario.

38 of 49

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Suponga que \${e://Field/country} ha obtenido **\${e://Field/vaccine\_1}\${e://Field** /efficacy\_1}

Esta vacuna es gratis para todos y **\${e://Field/endorser\_1}** recomienda que todos se vacunen lo más pronto posible.

La vacuna será administrada por \${e://Field/distribution\_1} \${e://Field/uptake\_1}

Si esta vacuna estuviese disponible, me vacunaría.

V No

- O Sí
- O No sé

Si esta vacuna estuviese disponible, ¿cuántos meses esperaría para vacunarse?

Número de meses:

O Nunca tomaría esta vacuna

Si esta vacuna estuviese disponible, ¿cuán de acuerdo está con las siguientes declaraciones?

	Muy en desacuerdo	En desacuerdo	Ni de acuerdo ni en desacuerdo	De acuerdo	Muy de acuerdo
La propagación de COVID-19 terminará rapidamente.	0	0	0	0	0
Sería muy poco probable que me dé COVID-19 si recibo esta vacuna.	0	0	0	0	0
Sería muy poco probable que sufra algún daño si recibo esta vacuna.	0	0	0	0	0
Esta campaña de vacunación del gobierno es para ayudar a los ciudadanos.	0	0	0	0	0

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### **Conjoint experiment 2**

Ahora, le mostraremos un escenario diferente.

https://columbiaiserp.col.qualtrics.com/Q/EditSection/Blocks/Ajax/Get...

Suponga que \${e://Field/country} ha obtenido **\${e://Field/vaccine\_2}\${e://Field** /efficacy\_2}

Esta vacuna es gratis para todos y **\${e://Field/endorser\_2}** recomienda que todos se vacunen lo más pronto posible.

La vacuna será administrada por \${e://Field/distribution\_2} \${e://Field/uptake\_2}

Si esta vacuna estuviese disponible, me vacunaría.

- O<sub>No</sub>
- O Sí
- 🔘 No sé

Si esta vacuna estuviese disponible, ¿cuántos meses esperaría para vacunarse?

Número de meses:

O Nunca tomaría esta vacuna

Si esta vacuna estuviese disponible, ¿cuán de acuerdo está con las siguientes declaraciones?

	Muy en desacuerdo	En desacuerdo	Ni de acuerdo ni en desacuerdo	De acuerdo	Muy de acuerdo
» La propagación de COVID-19 terminará rapidamente.	0	0	0	0	0
Sería muy poco probable que me dé COVID-19 si recibo esta vacuna.	0	0	0	0	0
» Sería muy poco probable que sufra algún daño si recibo esta vacuna.	0	0	0	0	0
» Esta campaña de vacunación del gobierno es para ayudar a los ciudadanos.	0	0	0	0	0

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### **Conjoint experiment 3**

Ahora, le mostraremos un escenario diferente.

Suponga que \${e://Field/country} ha obtenido **\${e://Field/vaccine\_3}\${e://Field** /efficacy\_3}

Esta vacuna es gratis para todos y **\${e://Field/endorser\_3}** recomienda que todos se vacunen lo más pronto posible.

42 of 49

La vacuna será administrada por \${e://Field/distribution\_3} \${e://Field/uptake\_3}

Si esta vacuna estuviese disponible, me vacunaría.

O<sub>No</sub>

O Sí

🔿 No sé

Si esta vacuna estuviese disponible, ¿cuántos meses esperaría para vacunarse?

Número de meses:

O Nunca tomaría esta vacuna

43 of 49

Si esta vacuna estuviese disponible, ¿cuán de acuerdo está con las siguientes declaraciones?

	Muy en desacuerdo	En desacuerdo	Ni de acuerdo ni en desacuerdo	De acuerdo	Muy de acuerdo
» La propagación de COVID-19 terminará rapidamente.	0	0	0	0	0
Sería muy poco probable que me dé COVID-19 si recibo esta vacuna.	0	0	0	0	0
» Sería muy poco probable que sufra algún daño si recibo esta vacuna.	0	0	0	0	0
» Esta campaña de vacunación del gobierno es para ayudar a los ciudadanos.	0	0	0	0	0

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# **Conjoint experiment 4**

Ahora, le mostraremos un escenario diferente.

Suponga que \${e://Field/country} ha obtenido **\${e://Field/vaccine\_4}\${e://Field** /efficacy\_4}

Esta vacuna es gratis para todos y **\${e://Field/endorser\_4}** recomienda que todos se vacunen lo más pronto posible.

44 of 49

La vacuna será administrada por \${e://Field/distribution\_4} \${e://Field/uptake\_4}

Si esta vacuna estuviese disponible, me vacunaría.

O<sub>No</sub>

O Sí

🔿 No sé

Si esta vacuna estuviese disponible, ¿cuántos meses esperaría para vacunarse?

Número de meses:

O Nunca tomaría esta vacuna

45 of 49

Si esta vacuna estuviese disponible, ¿cuán de acuerdo está con las siguientes declaraciones?

	Muy en desacuerdo	En desacuerdo	Ni de acuerdo ni en desacuerdo	De acuerdo	Muy de acuerdo
» La propagación de COVID-19 terminará rapidamente.	0	0	0	0	0
Sería muy poco probable que me dé COVID-19 si recibo esta vacuna.	0	0	0	0	0
» Sería muy poco probable que sufra algún daño si recibo esta vacuna.	0	0	0	0	0
» Esta campaña de vacunación del gobierno es para ayudar a los ciudadanos.	0	0	0	0	0

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#### **Conjoint experiment 5**

Ahora, le mostraremos un escenario diferente. Este es el último escenario.

Suponga que \${e://Field/country} ha obtenido **\${e://Field/vaccine\_5}\${e://Field** /efficacy\_5}

Esta vacuna es gratis para todos y **\${e://Field/endorser\_5}** recomienda que todos se vacunen lo más pronto posible.

46 of 49

La vacuna será administrada por \${e://Field/distribution\_5} \${e://Field/uptake\_5}

Si esta vacuna estuviese disponible, me vacunaría.

O<sub>No</sub>

O Sí

🔿 No sé

Si esta vacuna estuviese disponible, ¿cuántos meses esperaría para vacunarse?

Número de meses:

O Nunca tomaría esta vacuna

47 of 49

Si esta vacuna estuviese disponible, ¿cuán de acuerdo está con las siguientes declaraciones?

	Muy en desacuerdo	En desacuerdo	Ni de acuerdo ni en desacuerdo	De acuerdo	Muy de acuerdo
» La propagación de COVID-19 terminará rapidamente.	0	0	0	0	0
Sería muy poco probable que me dé COVID-19 si recibo esta vacuna.	0	0	0	0	0
» Sería muy poco probable que sufra algún daño si recibo esta vacuna.	0	0	0	0	0
» Esta campaña de vacunación del gobierno es para ayudar a los ciudadanos.	0	0	0	0	0

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### **Open-ended question and nationality**

Pensando en los diferentes escenarios que usted ha visto, ¿qué factores lo harían más dispuesto a tomar una vacuna sobre otra? Por favor, sea breve en su respuesta.

¿Cuál es su nacionalidad?

https://columbiaiserp.col.qualtrics.com/Q/EditSection/Blocks/Ajax/Get...



#### **Behavioral question**

¿Quisiera recibir un link de la Organización Panamericana de la Salud con más información sobre las vacunas del COVID-19?

Si usted selecciona sí, lo verá en la siguiente pantalla.

NoSí

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Este es el enlace: haga click aquí.

Este enlace abrirá en una nueva pestaña; por favor recuerde completar la encuesta.

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