

Executive Summary

Ecuador T2 COVID-19 Mobile Phone Survey 2020

1. Overview

The Ministry of Health leveraged existing frameworks to implement a second COVID-19 national survey to collect data regarding testing, practices, symptomology, and an assessment of the newly released health campaign. COVID-19 has altered the way that survey data are collected to protect the health and safety of those conducting surveys as well as stop potential disease transmission. However, effective and rapid decision making during all stages of the pandemic still require data not only about infections, but also about human behavior. Mobile phone surveys can offer the opportunity to collect real time data on behavior, exposure, knowledge and perceptions as well as care, treatment and resource allocation. To understand how Ecuadorians are continuing to cope with the spread of COVID-19, a nationwide survey was conducted to understand people's attitudes toward and experiences during the pandemic. This report summarizes results from the second Ecuador COVID-19 Mobile Phone Survey implemented in November 2020. The first COVID-19 Mobile Phone survey was conducted five months prior in June 2020. This report also compares the results of the first and second surveys.

In the second COVID-19 Mobile Phone survey, 1,200 individuals subscribed to CNT, Claro, and Movistar mobile phone networks anonymously participated using mobile telephony interactive voice response (IVR).

This survey used the infrastructure that was built to conduct the Bloomberg Philanthropies Data for Health Initiative Non-Communicable Diseases Mobile Phone Survey. The COVID-19 Survey was the culmination of significant work by Ecuador's Ministry of Health, including but not limited to telecommunications approval from the Telecommunications Regulatory and Control Agency of Ecuador, and agreements with mobile network operators. The Ministry of Health led questionnaire development, sampling and data collection. Technical assistance was provided by the US Centers for Disease Control and Prevention, RTI International, and InSTEDD. Bloomberg Philanthropies Data for Health Initiative provided financial support through the CDC Foundation.

This report is structured as follows:

- Goals (Section 2)
- Design and Implementation (Section 3)
- Results (Section 4)
- Conclusions (Section 5)

2. Goals

The goal of the Ecuador COVID-19 Mobile Phone Survey was to continue surveillance efforts to provide nationally representative estimates of knowledge, attitudes and practices, symptomology and access and barriers to testing to improve and enhance the COVID-19 pandemic response in Ecuador. In addition, the survey aimed to evaluate the ministerial campaign, "¡Yo Me Cuido!" (I take care of myself!), implemented in September 2020 to inform the public on best practices to minimize the spread

of COVID-19. The survey results may be used to help shape the central and local governments' response to the pandemic and indicate whether the current strategies are effective.

The COVID-19 Mobile Phone Survey included 35 questions on the following topics:

- Demographics
- COVID-19 exposure
- Illness and symptomology
- Testing and diagnosis and barriers to testing
- Practices
- Media campaign assessment and behavior change

3. Design and Implementation

3.1 Design

The design parameters used for the second COVID-19 Mobile Phone Survey are shown below in Table 1.

Table 1. Mobile Phone Survey Design

<i>Component</i>	<i>Design</i>
Mode	IVR
Sample	The sample employed a two-phase sample design. In the first phase a sample of mobile phone numbers from an explicit frame of mobile phone numbers for CNT, Claro, and Movistar subscribers was generated via random digit dialing. In the second phase, respondents were stratified to the sex distribution of the general.
Number of Interviews	1,200 interviews, allocated proportionally across strata to the general population distribution.
Strata	2 strata: male, female
Questionnaire	The COVID-19 Mobile Phone Survey questionnaire consisted of 35 questions and was administered in Spanish.
Contact times	All 7 days of the week, between 8am and 8pm each day
Contact attempts	<ul style="list-style-type: none"> • Contact #1: IVR • Contact #2: IVR, 26 hours after Contact #1 • Contact #3: IVR, 26 hours after Contact #2
Cost to Respondents	None.
Incentives	\$1 USD.
Tool and Hosting	Surveda, with data hosted at the Ecuador Ministry of Health

3.2 Implementation

The second Ecuador COVID-19 Mobile Phone Survey implementation followed the same four staged process used in the first COVID-19 survey: Planning and Pre-Test, Full-scale Data Collection, Data Management and Analysis, and Data Release and Use.

Full-scale data collection commenced on November 20th, 2020 and ended on November 24th, 2020. A total of 1,200 adults aged 18 years and older completed or partially completed the survey through one of the three mobile network operators during the five days of data collection.

4. Results

This section presents the following results:

- Demographics and Response Rates (section 4.1)
- COVID-19 Exposure (section 4.2)
- Illness and Symptomology (section 4.3)
- Testing, Diagnosis and Treatment (section 4.4)
- Practices (section 4.5)
- Media Campaign Assessment (section 4.6)

4.1 Demographics and Response Rates

The second Ecuador COVID-19 Mobile Phone Survey included 1,200 interviews across two strata. Table 2 shows the Mobile Phone demographic distribution compared to the UN population national statistics for sex.

	<i>Mobile Phone Sample</i>	<i>National</i>
Sex	1,185	11,274,187
Male	45.5%	48.6%
Female	54.5%	51.4%

To achieve the 1,200 interviews, 15,935 mobile phone numbers were contacted over the course of the full-scale survey. Out of these, 3,831 provided a response and 2,625 consented and provided the age and sex information necessary to be eligible to participate. Of these, 161 were ineligible due to age, and 1,222 respondents of eligible age were rejected due to stratum sample size being full. The result was 1,242 eligible respondents, of which 1,200 provided interviews (completed or partial). Completed interviews were defined as answering all survey questions. Partial interviews were defined as completing the demographics questions and at least one topic area and not finishing the survey. The interview rate was 96.6% and the overall response rate was 15.9%, which is described in detail below.

The final disposition codes for this sample are shown in Table 3.

Disposition	Definition	N	Percent
1. Complete	Answered all survey questions	1,045	6.6%
2. Partial	Answered at least one topic area but did not complete the survey	155	1.0%
3. Breakoff: Eligible	Answered age and sex questions but did not answer any additional questions	42	0.3%
4. Ineligible: Age	Under age 18	161	1.0%
5. Ineligible: Quotas	Answered age and sex questions but quotas were full	1,222	7.7%
6. Refused	Refused consent	936	5.9%
7. Breakoff: unknown eligibility	Answered some questions but stopped before completing eligibility	270	1.7%
8. No answer	No answer, possibly nonworking number	12,104	76.0%
<i>Total</i>		15,935	

The Ecuador COVID-19 survey employed a two-phased sampling design, the first phase was a random sample of mobile phone numbers from an explicit frame. The second phase reflected respondents from the first phase stratified proportionally to the general population by sex. Each phase had an accompanying response rate. The final response rate was the product of Phase I and Phase II response rates. For pre-test and full-scale surveys, we used a filtered sample of MPNs provided by the Dutch company Sample Solutions.

For Phase I, the response rate was the proportion of MPNs screened out of those dialed.

$$\text{Phase I Response Rate} = \frac{\text{Number MPNs screened}}{\text{Number MPNs dialed}}$$

Or,

$$\text{Phase I Response Rate} = \frac{2,625}{15,935} = 0.165$$

For Phase II, we used RR6 from AAPOR.

$$\text{Phase II Response Rate } RR6_s = \frac{IP_s}{IP_s + O_s}, \text{ for stratum } s.$$

RR₆ was derived from the 2018 Standard Definitions of the [American Association for Public Opinion Research \(AAPOR\)](#). Phase II stratum-specific response rates (RR #6) are presented Table 4:

<i>Males</i>	<i>Females</i>
0.9596	0.9718

The overall response rate is the product of Phase I and Phase II response rates, resulting in an overall response rate for the entire second COVID-19 Mobile Phone Survey in Ecuador:

$$RR_{overall} = \frac{IP_{overall}}{IP_{overall} + O_{overall}} * RR_{Phase I} = \frac{1200}{1200 + 42} * 0.165 = 0.1592$$

4.2 COVID-19 Exposure

Approximately one third (32.6%) of Ecuadorian adults aged 18 years and older reported that they live in an area where there are cases in the community. The respondents of the second survey were less likely than the respondents of the first survey to report that they live in an area where there are cases in the community. In addition, overall, 13.5% of Ecuadorians visited a place with cases in the community. Similarly, the respondents of the second survey were statistically significantly less likely than the respondents of the first survey to report that they visited a place with cases in the community. Overall, a small percentage (2.1%) reported international travel in the previous two weeks. Overall, one in ten reported caring for a suspected or confirmed case in the previous two weeks.

Table 5 shows key outcomes overall and by sex from the second COVID-19 Mobile Phone Survey on exposure.

	<i>Overall</i>	<i>Males</i>	<i>Females</i>
	% (95% CI)	% (95% CI)	% (95% CI)
Living in a place with cases in the community	32.6 (29.3 , 35.8)	33.2 (28.4 , 38.1)	31.9 (27.6 , 36.3)
Visiting a place with cases in the community	13.5 (11.2 , 15.8)	15.0 (11.5 , 18.5)	12.0 (9.0 , 15.0)
Traveled internationally in the last two weeks	2.1 (1.2 , 3.0)	2.3 (1.2 , 3.3)	2.0 (0.5 , 3.5)
Caring for a suspected or confirmed case	10.7 (8.6 , 12.8)	9.7 (6.8 , 12.6)	11.5 (8.5 , 14.6)

4.3 Illness and Symptomology

Tracking the symptoms of sick people has been important during this pandemic to understand the presentation of COVID-19. Respondents reported a wide range of symptoms. When asked if they were ill, approximately one in ten adult Ecuadorians reported feeling ill (9.3%). For men, the most common symptoms reported were fever (24.1%), muscle or body aches (23.8%), and shortness of breath (21.2%). Men from the second round of the survey were statistically significantly more likely to report shortness

of breath as a symptom when ill compared to men from the first survey. For women, the most common symptoms reported were muscle or body aches (31.1%), fever (22.8%) and sore throat (19.1%). Women from the second survey were statistically significantly more likely to report a dry cough when ill compared to women from the first survey. Men and women reported the same mean number of symptoms (1.1 symptoms vs. 1.3, respectively). Overall, 36.7% of adult Ecuadorians reported experiencing either fever, dry cough or shortness of breath when ill.

Table 6 shows reported illness and symptomology overall and by sex from the second COVID-19 Mobile Phone Survey.

Table 6. Illness and Symptomology Overall and by Sex						
	Overall		Males		Females	
	% or mean (95% CI)		% or mean (95% CI)		% or mean (95% CI)	
Feeling ill	9.3	(7.2 , 11.4)	9.4	(6.3 , 12.5)	9.2	(6.4 , 12.0)
Fever	23.4	(13.9 , 32.9)	24.1	(10.5 , 37.6)	22.8	(9.5 , 36.1)
Dry cough	18.9	(10.3 , 27.5)	19.5	(6.7 , 32.3)	18.3	(6.8 , 29.9)
Shortness of breath	18.2	(9.0 , 27.4)	21.2	(6.5 , 35.9)	15.3	(4.4 , 26.3)
Muscle aches or body aches	27.6	(17.1 , 38.0)	23.8	(8.7 , 38.9)	31.1	(16.7 , 45.6)
Sore throat	14.3	(7.1 , 21.5)	9.3	(1.8 , 16.9)	19.1	(7.3 , 30.9)
Vomiting or diarrhea	8.4	(2.3 , 14.4)	4.0	(0.0 , 9.4)	12.6	(2.2 , 23.0)
Loss of taste or smell	12.6	(5.5 , 19.7)	15.1	(2.7 , 27.5)	10.3	(3.0 , 17.6)
Mean number of symptoms	1.2	(0.9 , 1.6)	1.1	(0.6 , 1.7)	1.3	(0.8 , 1.8)
Experienced fever, dry cough or shortness of breath	36.7	(25.3 , 48.0)	37.0	(20.3 , 53.7)	36.3	(20.9 , 51.7)

4.4 Testing, Diagnosis and Treatment

Testing is an important component of the COVID-19 pandemic response. Overall, 39.4% of adult Ecuadorians tried to get a test for COVID-19; more males tried to get tested compared to females (45.3% vs. 33.9% respectively). Ecuadorians from the second survey were statistically significantly more likely to report trying to get tested for COVID-19 compared to Ecuadorians from the first survey. Overall, three out of ten Ecuadorians (30.4%) received a COVID-19 test. Similarly, Ecuadorians from the second survey were statistically significantly more to report receiving a COVID-19 test compared to Ecuadorians from the first survey (30.4% vs. 12.8% respectively.) Of those who received a test, 17.5% had a positive diagnosis and of those positive cases, 38.2% received treatment. Men reported higher rates of testing (35.7% vs. 25.6%, respectively) compared to women. Treatment for COVID-19 among the entire adult Ecuadorian population was less than 3%. Among individuals who tried to get a test for COVID-19 but were not able to, 38.5% reported that it was too expensive, 37.9% reported they were not eligible and 23.6% reported that the test was not available. Of those individuals who were not tested and did not try to get a test, approximately a third (35.8%) thought that they would be able to get a test if they needed one.

Overall, 42.5% of adult Ecuadorians reported that a friend had been diagnosed with COVID-19. Approximately three in 10 reported that a close family member (28.1%) or a neighbor (31.6%) had been diagnosed with COVID-19. Ecuadorians from the second survey were statistically significantly more likely to report that a close family member, friend or neighbor was diagnosed with COVID-19 compared to Ecuadorians from the first survey.

Table 7 shows reported testing, diagnosis and treatment overall and by sex from the second COVID-19 Mobile Phone Survey.

Table 7. Testing, Diagnosis and Treatment Overall and by Sex						
	Overall		Males		Females	
	% (95% CI)		% (95% CI)		% (95% CI)	
Tried to get a test for COVID-19 among the population	39.4	(36.0 , 42.8)	45.3	(40.2 , 50.4)	33.9	(29.4 , 38.4)
Tested for COVID-19	30.4	(27.3 , 33.6)	35.7	(30.9 , 40.6)	25.6	(21.5 , 29.7)
COVID-19 diagnosis	17.5	(12.7 , 22.3)	18.5	(11.6 , 25.4)	16.2	(9.7 , 22.7)
Treatment	38.2	(23.0 , 53.3)	36.9	(15.8 , 58.1)	39.9	(19.0 , 60.8)
Treatment among the population	2.7	(1.3 , 4.1)	3.4	(0.9 , 6.0)	2.1	(0.7 , 3.5)
Reason for not getting tested: Not available	23.6	(13.9 , 33.4)	18.9	(6.0 , 31.8)	28.7	(14.2 , 43.1)
Reason for not getting tested: Not eligible	37.9	(26.4 , 49.4)	45.9	(29.4 , 62.5)	29.4	(13.7 , 45.1)
Reason for not getting tested: Too expensive	38.5	(27.6 , 49.3)	35.2	(19.5 , 50.9)	42.0	(26.8 , 57.1)
Think they would be able to get a test among those who have not tried to get a test	35.8	(31.5 , 40.2)	40.0	(33.1 , 47.0)	32.5	(27.0 , 38.0)
Close family member diagnosed	28.1	(25.0 , 31.2)	28.2	(23.5 , 32.8)	28.0	(23.8 , 32.1)
Friend diagnosed	42.5	(39.1 , 46.0)	41.8	(36.7 , 46.9)	43.2	(38.5 , 47.9)
Neighbor diagnosed	31.6	(28.4 , 34.8)	27.2	(22.7 , 31.8)	35.8	(31.3 , 40.3)

4.5 Practices

The pandemic has led to a massive global public health campaign to slow the spread of the virus by encouraging significant shifts in behavior, including avoiding crowded places, practicing physical distancing and wearing masks in public. Overall, a little more than half (57.7%) of adult Ecuadorians reported that they are avoiding public places. Six out of ten (61.6%) men and women in Ecuador reported avoiding public transportation. In addition, over three-quarters (83.3%) reported avoiding social contact. The respondents of the second survey were statistically significantly more likely than the

respondents of the first survey to report that they were avoiding social contact (83.3% vs. 79.0% respectively.) Most (94.7%) adult Ecuadorians reported that they had left their home in the previous seven days to shop or perform permitted activities. Of those who reported leaving their home, almost half (46.8%) left on one or two days, a quarter (25.1%) left on three or four days and 22.9% left on five or more days in the previous seven days. About half (56.1%) reported that they always stayed at least six feet away from other people when in public. Almost nine out of ten (87.7%) always wore a face mask or face covering when in public. Furthermore, 97.2% of adult Ecuadorians reported that they properly wore their face mask over their nose and mouth when wearing a face mask in public.

Table 8 presents key findings on practices overall and by sex.

Table 8. Practices Overall and by Sex						
	<i>Overall</i>		<i>Males</i>		<i>Females</i>	
	%	(95% CI)	%	(95% CI)	%	(95% CI)
Avoided public places	57.7	(54.3 , 61.1)	57.3	(52.3 , 62.4)	58.0	(53.4 , 62.6)
Avoided public transportation	61.6	(58.3 , 64.9)	59.4	(54.5 , 64.4)	63.7	(59.2 , 68.1)
Avoided social contact	83.3	(80.7 , 85.9)	82.6	(78.7 , 86.5)	83.9	(80.4 , 87.3)
Left home in the last 7 days	94.7	(93.1 , 96.4)	96.0	(93.9 , 98.1)	93.6	(91.1 , 96.0)
Left home 1-2 days	46.8	(43.4 , 50.2)	42.1	(37.1 , 47.1)	51.2	(46.5 , 55.9)
Left home 3-4 days	25.1	(22.1 , 28.1)	27.7	(23.1 , 32.3)	22.6	(18.7 , 26.5)
Left home ≥ 5 days	22.9	(20.0 , 25.8)	26.2	(21.8 , 30.6)	22.6	(18.7 , 26.5)
Always stayed at least 6 ft away from other people in public	56.1	(52.5 , 59.6)	57.7	(52.3 , 62.6)	54.7	(49.9 , 59.9)
Always wore a face mask or covering when in public	87.7	(85.6 , 90.0)	87.0	(83.9 , 90.2)	88.6	(85.6 , 91.6)
Always covered nose and mouth when wearing a face mask in public	97.2	(96.0 , 98.3)	97.5	(95.9 , 99.1)	96.8	(95.2 , 98.5)

4.6 Media Campaign Assessment

On September 13th, 2020 the Government of Ecuador ended the state of exemption, which included rigorous control of restrictions in mobilization, public services and events by police, army and local governments with the goal of enforcing social distancing and use of face masks. After the state of exemption ended, the Government of Ecuador released a new health campaign- ¡Yo Me Cuido! (“I take care of myself!”) that communicated guidelines for preventing infection and spread of COVID-19 and emphasized the responsibility of the citizens for social distancing, mask wearing and hand washing. Overall, 70.2% of adult Ecuadorians reported listening to or seeing the ¡Yo Me Cuido! campaign. When

asked how their social distancing behavior had changed since mid-September, approximately two-fifths (43.3%) reported no change in their behaviors.

Table 9 presents key findings on the media campaign assessment overall and by sex.

Table 9. Practices Overall and by Sex						
	<i>Overall</i>		<i>Males</i>		<i>Females</i>	
	%	(95% CI)	%	(95% CI)	%	(95% CI)
Listened to or saw ¡Yo Me Cuido! campaign	70.2	(67.1 , 73.2)	70.4	(66.1 , 74.7)	70.0	(65.7 , 74.2)
Change in social distancing practice: same as before	43.3	(39.9 , 46.8)	44.2	(39.1 , 49.3)	42.5	(37.8 , 47.2)
Change in social distancing practice: less than before	21.1	(18.3 , 23.8)	21.6	(17.6 , 25.5)	20.6	(16.8 , 24.4)
Change in social distancing practice: more than before	35.6	(32.2 , 39.0)	34.2	(29.3 , 39.2)	36.9	(32.3 , 41.5)

4.7 Comparison

To determine differences between the first and second survey, p-values based on the t-statistic were calculated using SUDAAN. Overall, regarding exposure, less respondents of the second survey reported that they live in an area where there are cases in the community and that they visited an area where there are cases in the community. When comparing illness symptomology, more men in the second survey reported shortness of breath and more women reported a dry cough as a symptom when ill. When comparing testing, Ecuadorians from the second survey were more likely to report trying to get tested for COVID-19 as well as receiving a COVID-19 test. Respondents from the second survey were more likely to report that a close family member, friend or neighbor was diagnosed with COVID-19 compared to Ecuadorians from the first survey. Lastly, respondents of the second survey were more likely than the respondents of the first survey to report that they were avoiding social contact.

Tables 10 and 11 present the estimates for the first and second survey along with corresponding p-values.

Table 10. Comparison of the estimates for the first and second survey with corresponding p-values.

Exposure	T1 - June 2020		T2 - November 2020		p-value	Direction
	n	Wgt'd %	n	Wgt'd %		
Living in a place with cases in the community	1144	38.8	1142	32.6	0.0074	-
Visiting a place with cases in the community	1132	17.9	1139	13.5	0.0181	-
Traveled internationally in the last two weeks	1131	1.8	1137	2.1	0.7329	-
Caring for a suspected or confirmed case	1117	12.3	1126	10.7	0.2583	-
Symptoms						
Feeling ill	1145	9.5	1134	9.3	0.8854	-
Fever	91	13.5	97	23.4	0.1329	+
Dry cough	90	10.7	97	18.9	0.1329	+
Shortness of breath	90	10.6	95	18.2	0.0702	+
Muscle aches or body aches	90	30.1	95	27.6	0.8285	-
Sore throat	90	12.2	95	14.3	0.7104	-
Vomiting or diarrhea	90	7.5	95	8.4	0.8343	-
Loss of taste or smell	89	7.5	93	12.6	0.2886	+
Testing						
Tried to get a test for COVID-19 (among POP)	1135	19.7	1123	39.4	0.0004	+
Tested for COVID-19	1134	12.8	1129	30.4	0.0003	+
COVID-19 diagnosis	135	12.9	342	17.5	0.3922	+
Treatment for COVID-19	22	25.9	59	38.2	0.3338	+
Treatment for COVID-19 (among POP)	1020	0.5	846	2.7	0.0144	+
Think they would be able to get a test among those who have not tried to get a test	908	32.1	672	35.8	0.2803	+
Known Dx Cases						
Close family member diagnosed	1136	16.4	1129	28.1	0.0017	+
Friend diagnosed	1137	29.0	1128	42.5	0.001	+
Neighbor diagnosed	1125	20.8	1127	31.6	0.0058	+
Practices						
Avoided public places	1146	51.8	1169	57.7	0.0996	+
Avoided public transportation	1144	62.6	1165	61.6	0.7651	-
Avoided social contact	1130	79.0	1158	83.3	0.0414	+
Left home in the last seven days	1111	90.8	1146	94.7	0.0617	+
Wore face mask or face covering when leaving home	1004	96.5	1130	99.7	0.0002	+

Table 11. Comparison of the estimates for the first and second survey with corresponding p-values, by sex.												
	T1 - June 2020		T1 - November 2020				T1 - June 2020		T1 - November 2020			
	Male						Female					
Exposure	n	Wgt'd %	n	Wgt'd %	p-value	Direction	n	Wgt'd %	n	Wgt'd %	p-value	Direction
Living in a place with cases in the community	531	36.9	522	33.2	0.1812	-	613	40.6	620	31.9	0.0011	-
Visiting a place with cases in the community	521	20.0	524	15.0	0.0033	-	611	15.9	615	12.0	0.0546	-
Traveled internationally in the last two weeks	520	2.6	524	2.3	0.835	-	611	1.2	613	2.0	0.2532	-
Caring for a suspected or confirmed case	515	11.9	516	9.7	0.3274	-	602	12.8	610	11.5	0.4619	-
Symptoms												
Feeling ill	521	10.7	512	9.4	0.5969	-	624	8.5	622	9.2	0.7677	-
Fever	49	9.5	46	24.1	0.1159	+	42	18.4	51	22.8	0.4939	+
Dry cough	48	16.2	46	19.5	0.422	+	42	4.3	51	18.3	0.0484	+
Shortness of breath	48	6.2	45	21.2	0.0005	+	42	15.7	50	15.3	0.9228	+
Muscle aches or body aches	48	24.4	45	23.8	0.9239	-	42	36.8	50	31.1	0.6424	-
Sore throat	48	17.8	45	9.3	0.2226	-	42	5.5	50	19.1	0.1229	-
Vomiting or diarrhea	48	6.2	45	4.0	0.7649	-	42	9.0	50	12.6	0.5528	-
Loss of taste or smell	48	9.6	43	15.1	0.1544	+	41	4.9	50	10.3	0.4959	+
Testing												
Tried to get a test for COVID-19 (among POP)	517	24.0	508	45.3	0.0002	+	618	15.7	615	33.9	0.0001	+
Tested for COVID-19	517	16.0	508	35.7	0.0003	+	617	9.7	621	25.6	0.0001	+
COVID-19 diagnosis	82	15.2	186	18.5	0.607	+	53	9.3	156	16.2	0.3783	+
Treatment for COVID-19	14	27.3	30	36.9	0.5703	+	8	22.5	29	39.9	0.1648	+
Treatment for COVID-19 (among POP)	448	0.8	352	3.4	0.0752	+	572	0.2	494	2.1	0.0023	+
Think they would be able to get a test among those who have not tried to get a test	386	36.5	272	40.0	0.08	+	522	28.4	400	32.5	0.3011	+
Known Dx Cases												
Close family member diagnosed	514	14.9	515	28.2	0.0009	+	622	17.9	614	28.0	0.0421	+
Friend diagnosed	516	28.9	514	41.8	0.0319	+	621	29.1	614	43.2	0.0008	+
Neighbor diagnosed	510	18.0	513	27.2	0.0338	+	615	23.4	614	35.8	0.0001	+
Practices												
Avoided public places	526	50.2	528	57.3	0.2519	+	620	53.3	641	58.0	0.1184	+
Avoided public transportation	526	63.3	528	59.4	0.4676	-	618	61.9	637	63.7	0.578	-
Avoided social contact	515	77.6	527	82.6	0.0961	+	615	80.3	631	83.9	0.1183	+
Left home in the last seven days	505	93.9	519	96.0	0.0413	+	606	87.9	627	93.6	0	+
Wore face mask or face covering when leaving home	470	96.1	620	99.8	0	+	534	96.9	510	99.6	0.0107	+

5. *Conclusions*

Effective and rapid decision making during the pandemic require data not only about infections, but also about human behavior in Ecuador. The data presented in the second Ecuador COVID-19 Mobile Phone Survey provide a strong foundation for continued development of the response strategies in Ecuador. Some key outcomes included:

- Overall, one third (32.6%) of Ecuadorian adults aged 18 years and older reported that they live in an area where there are cases in the community.
- When asked if they were ill, approximately one in ten adult Ecuadorians reported feeling ill (9.3%).
- For men, the most common symptoms reported were fever (24.1%), muscle or body aches (23.8%), and shortness of breath (21.2%). For women, the most common symptoms reported were muscle or body aches (31.1%), fever (22.8%) and sore throat (19.1%).
- Overall, 36.7% of adult Ecuadorians reporting experiencing either fever, dry cough or shortness of breath when ill.
- Overall, two-fifths (39.5%) of adult Ecuadorians tried to get a test for COVID-19.
- Overall, three out of ten Ecuadorians (30.4%) received a COVID-19 test. Of those who received a test, 17.5% had a positive diagnosis and of those positive cases, 38.2% received treatment. Men reported higher rates of testing (35.7% vs. 25.6%, respectively) compared to women.
- Among individuals who tried to get a test for COVID-19 but were not able to, 38.5% reported that it was too expensive, 37.9% reported they were not eligible and 23.6% reported that the test was not available.
- Of those individuals who were not tested and did not try to get a test, a third (35.8%) thought that they would be able to get a test if they needed one.
- Overall, a little more than half (57.7%) of adult Ecuadorians reported that they are avoiding public places. Six out of ten (61.6%) men and women in Ecuador reported avoiding public transportation. Over three-quarters (83.3%) reported avoiding social contact. About half (56.1%) reported that they always stayed at least six feet away from other people when in public. Almost nine out of ten (87.7%) always wore a face mask or face covering when in public. Lastly, 97.2% of adult Ecuadorians reported that they properly wore their face mask over their nose and mouth when wearing a face mask in public.
- Overall, 70.2% of adult Ecuadorians reported listening to or seeing the ¡Yo Me Cuido! campaign. When asked how their social distancing behavior had changed since mid-September, approximately two-fifths (43.3%) reported no change in their behaviors.

Conclusions:

Findings from this second survey help provide additional information on select COVID-19 KAPs for Ecuadorian adults aged 18 years and older. Results will inform the Ministry of Health in Ecuador as they continue to improve and enhance COVID-19 response efforts.

Limitations:

The main limitation of any mobile phone survey includes the population's access to a mobile phone. Therefore, the population who do not have access to mobile phones was not represented in this survey. The results of the mobile phone survey were based on self-reports and may be influenced by recall or social desirability bias.