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COVID-19 vaccination intention among Venezuelan migrant populations in Colombia, 2021

Dear Editor,

One key aspect for control of the Coronavirus Diseases 2019 (COVID-19) pandemic is vaccination. This is related to multiple factors (e.g. availability), but especially to vaccine hesitancy and intention. In the recent article from Urrunaga-Pastor et al. [1], they describe a COVID-19 vaccine intention of 80% in a large Latin American sample. Whilst we agree on its importance, we would like to discuss our assessment of a particularly complex and vulnerable subpopulation, Venezuelan migrants in Colombia.

We conducted three random sample-based community surveys among Venezuelans in Cucuta, Norte de Santander department (surveys in the El Talento and Comuneros barrios) and Pasto, Nariño department (one survey), Colombia, to gather relevant information to be used to target effective communications to this population about COVID-19 and COVID-19 vaccine. Norte de Santander department, on the northeast border with Venezuela, is the major point of entry into Colombia from Venezuela. Nariño department, located on the southwest border with Ecuador, is the major point of exit for Venezuelans across the international border. Surveys included 926 respondents (Table 1). Eleven focus groups were conducted concurrent with surveys. Fieldwork was conducted in late August and early September 2021. Vaccine availability for Venezuelan migrants in Colombia was very limited at that time, but has recently become broader.

Among survey respondents, more than 51% considered that COVID-19 vaccine is too new or that social media make them feel unsure about it (Table 1). Between 3.7% (Comuneros, Cucuta) and 26.4% (Pasto) of respondents do not trust the government about vaccine (Table 1). However, from 19.9% (Pasto) to 54.4% (El Talento, Cucuta), answered that someone in their households had already been vaccinated (Table 1). Of greater importance, from 74.7% (El Talento, Cucuta) to 91.6% (Comuneros, Cucuta), said that they would be vaccinated when the vaccine becomes available for them (Table 1). Moreover, large majorities, from 71.7% (El Talento, Cucuta) to 94.1% (Pasto), will follow the advice of doctors regarding COVID-19 vaccination (Table 1). During focus groups, a lack of legal documentation (i.e., not being “regular”) was cited as the biggest barrier to vaccination. Focus group participants were aware of a wide variety of false information concerning COVID-19 vaccine and treatment, though they tended not to accept it. Concern about vaccination during pregnancy was very common.

The survey data on vaccine plans, practices, and opinions are promising in this vulnerable Venezuelan migrant population (Table 1). Although negative opinions are common, the majority of households at all three assessed sites either had someone vaccinated already or have plans to when the vaccine is available. There appears to be little firm opposition to the vaccine, as seen in the United States and elsewhere [1–4]. This is consistent with beliefs that COVID-19 is genuine and of concern. Nevertheless, the household prevalence of a lack of confidence

that the vaccine is effective suggests that public education still has a substantial opportunity to raise the ultimate vaccination level [1–3].

The distribution of opinions about the vaccine (Table 1) shows the power and thought penetration of adverse social media posts, greater than 50% in all three sites [2,3]. The relatively recent development of vaccines in these three communities a common concern, just as it is in the United States and elsewhere. Side effects, whether general or specific, also appear to be a highly prevalent concern [5]. These findings make the importance of an effective communications plan of obvious importance. Given these common opinions, it is perhaps remarkable that vaccine hesitancy appears to be as uncommon as it does (Table 1).

While there is substantial awareness of inaccurate information about the vaccine and less than effective, or even dangerous, preventive measures, doctors remain a generally trusted source of information, guidance, and treatment [3]. These data suggest that doctors should be utilized to educate the public about the benefits of vaccination and to convince their patients to be vaccinated. This is especially important among migrant populations. Migrants’ knowledge of vaccine benefits was deep and broad, including things like opening schools, reducing the severity of COVID-19 disease, and preventing spread through the community.

The most significant barrier to vaccination was the need for documentation to be “regular.” That came up in several places and contexts. However, the distribution of COVID-19 vaccines has changed substantially in the following months since fieldwork was performed. At that time, the vaccine had just been made available, at least officially, to Venezuelans who were documented or pregnant. In the recent weeks before this letter was prepared, eligibility was expanded to include undocumented migrants on a supply-available basis. In addition, in the past several days, the government announced that all Venezuelans would be vaccinated equally with Colombians as soon as Colombian children are vaccinated. However, as of the date this letter is submitted, planning for vaccination of undocumented persons is difficult because supply for them is uncertain until the very last moment. It appears that undocumented Venezuelans continue to be treated differently from other persons in Colombia. However, it is likely that this will change soon as the government has recognized that everyone must be protected to protect the country as a whole. Like other reports, this one highlights the importance of Venezuelan migrant populations in Colombia over the recent years [6].

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Table 1

Practices, Attitudes, Select Opinions, and Adherence to Doctors' Advice Regarding COVID-19 Vaccine, Venezuelan Migrants in Pasto, Nariño Department, and Comuneros and El Talento, Cucuta, Norte de Santander Department, Colombia, 2021; Percents and 95% Confidence Intervals.

	Pasto, Nariño		Comuneros, Cucuta, Norte de Santander		El Talento, Cucuta, Norte de Santander	
	N = 351		N = 215		N = 353	
	Household %	95% CI	Household %	95% CI	Household %	95% CI
Per cent of Households by Practice and Attitudes Regarding COVID Vaccine						
<i>In the household ... ?</i>						
Someone has been vaccinated	19.9	15.3–23.5	28.8	22.9–35.4	54.4	49.2–59.5
None vaccinated	78.1	73.4–82.1	66.1	59.3–72.4	43.6	38.0–48.3
Will when vaccine available	84.3	79.6–88.2	91.6	85.8–95.6	74.7	67.2–81.3
Will not even when available	5.5	3.2–8.8	6.3	2.9–11.6	13.9	8.9–20.3
Positive belief vaccine prevents COVID-19?	77.8	73.1–81.8	86.5	81.2–90.8	63.7	58.6–68.6
Belief vaccine does not prevent COVID-19	9.7	7.0–13.2	2.8	1.0–6.0	10.8	7.9–14.4
Don't know if vaccine effective	12.3	9.2–16.1	10.7	6.9–15.6	25.2	21.0–30.0
	Pasto, Nariño		Comuneros, Cucuta, Norte de Santander		El Talento, Cucuta, Norte de Santander	
	N = 356		N = 216		N = 354	
	Household %	95% CI	Household %	95% CI	Household %	95% CI
Per cent of Households with Select Opinions Regarding COVID-19 Vaccine						
<i>Characteristic</i>						
It's too new	61.2	56.1–66.2	26.4	20.6–32.8	57.1	51.9–62.1
Social media makes feel unsure	58.7	53.5–63.7	51.9	45.0–58.7	62.4	57.3–67.3
Doesn't trust government	26.4	22.1–31.2	3.7	1.6–7.2	19.5	15.7–23.9
Too afraid of injections	30.1	25.5–35.0	19.0	14.0–24.9	22.9	18.8–27.5
Religion prohibits	1.7	0.8–3.6	0.5	<0.1–2.6	1.1	0.4–2.9
Had COVID-19 and doesn't need vaccine	1.1	0.4–2.9	1.9	0.5–4.7	2.5	1.3–4.8
No time to get it	3.9	2.4–6.5	6.0	3.2–10.1	7.3	5.1–10.5
Cannot afford it	7.9	5.5–11.1	0.9	0.1–3.3	3.1	1.7–5.5
Concerned about side effects	54.8	49.6–59.9	26.9	21.1–33.3	29.4	24.9–34.3
Health condition prevents vaccination	22.5	18.4–27.1	28.7	22.8–35.2	6.5	4.4–9.6
Specific side effect worry	59.8	54.7–64.8	40.3	33.7–47.2	31.1	26.5–36.1
God will protect	18.5	14.9–22.9	6.0	3.2–10.1	10.2	7.4–13.8
	Pasto, Nariño		Comuneros, Cucuta, Norte de Santander		El Talento, Cucuta, Norte de Santander	
	N = 352		N = 215		N = 353	
	Household %	95% CI	Household %	95% CI	Household %	95% CI
Per cent of Households Following Advice of Doctor Regarding Vaccine						
<i>Follow Advice?</i>						
Yes	94.9	92.1–96.7	90.7	86.0–94.2	71.7	66.8–76.1
No	3.4	2.4–6.6	2.3	0.8–5.3	5.1	3.3–7.9
Don't know	1.1	0.4–2.9	7.0	4.0–11.3	21.8	17.8–26.4
Refuse	0	–	0.0	–	1.4	0.6–3.3

Declaration of competing interest

Nothing to declare.

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References

[1] Urrunaga-Pastor D, Bendezu-Quispe G, Herrera-Añazco P, Uyen-Cateriano A, Toro-Huamanchumo CJ, Rodriguez-Morales AJ, et al. Cross-sectional analysis of COVID-19 vaccine intention, perceptions and hesitancy across Latin America and the Caribbean. *Trav Med Infect Dis* 2021;41:102059.

[2] Mangla S, Zohra Makkia FT, Pathak AK, Robinson R, Sultan N, Koonisetty KS, et al. COVID-19 vaccine hesitancy and emerging variants: evidence from six countries, vol. 11. Basel, Switzerland: Behavioral sciences; 2021.

[3] Rodriguez-Morales AJ, Franco OH. Public trust, misinformation and COVID-19 vaccination willingness in Latin America and the Caribbean: today's key challenges. *Lancet Reg. Health Am.* 2021;3:100073.

[4] Nahum A, Drekonja DM, Alpern JD. The erosion of public trust and SARS-CoV-2 vaccines- more action is needed. *Open Forum Infect Dis* 2021;8:ofaa657.

[5] Shrestha S, Khatri J, Shakya S, Danekhu K, Khatiwada AP, Sah R, et al. Adverse events related to COVID-19 vaccines: the need to strengthen pharmacovigilance monitoring systems. *Drugs & therapy perspectives : for rational drug selection and use*; 2021. p. 1–7.

[6] Tobon-Giraldo M, Salazar MI, Aguirre-Florez M, Montilla-Trejos CA, Suárez JA, Rodriguez-Morales AJ. The dilemmas and care challenges of Venezuelan pregnant migrants presenting in Colombia. *Travel Med Infect Dis*; 2019.

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