

High SARS-CoV-2 viral load in travelers arriving in Spain with a negative COVID-19 test prior to departure: Ecuador as a model for COVID-19 testing quality in Latin America.

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We read with interest the paper by Molero-Salinas et al. on COVID-19 false negative travelers arriving to Spain in 2021 (1). This study challenges the effectiveness of SARS-CoV-2 testing prior to flight departure to control COVID-19 spread. The authors report 196 COVID-19 false negative passengers with an average PCR Ct value of 20.3, meaning a high viral load.

It seems striking that 90.8% of those false negative cases came from Latin American countries. However, we wanted to highlight here the fact that no false positive cases were detected in travelers arriving from Ecuador. The lack of false positive cases from Ecuador strongly contrasts with the cases detected from Colombia (with 114 cases) and Peru (with 12 cases) that accounted for 64.3% of the total false negative tests. This is particularly interesting since those three countries have an extensive migrant population living in Spain in 2021 (297,729 Colombians; 126,868 Ecuadorians; 112,042 Peruvians) and a significant proportion of the passengers flying to Spain comes from those countries (2).

Molero-Salinas et al. suggested two explanations for the false negative tests observed among those travelers: 1) low sensitivity or lack of validity of the test implemented in the country of origin; 2) fake test certificates (1). Nevertheless, we aim to describe the most plausible explanation for the good quality of COVID-19 testing that prevented false negative cases among the Ecuadorians travelling to Spain from April to June 2021.

Ecuador, Colombia and Peru are low-middle income countries (LMICs) with strong similarities in technological capabilities for laboratory diagnosis. Moreover, diagnostics supplies from transnational companies are usually the same within this region (3-5). Although low sensitivity

SARS-CoV-2 PCR kits have been distributed in LMICs, this has been a similar challenge for those countries (3,5). So, we hypothesized that the reasons Ecuadorian travelers' COVID-19 certificates were more reliable is because the difficulty to fake test certificates in Ecuador and the availability of these test at affordable fees for Ecuadorians.

The Ecuadorian Ministry of Health (EMoH) strictly regulated the COVID-19 test certificate format, including QR codes for laboratory identification and even direct access to laboratory results, allowing easy screenings for fake certificates at the departure airports, or even calling to the laboratory to confirm the test results during the airport check in for travelers to the Galapagos Islands.

By April 2021, the EMoH set a maximum price of 45.08 USD for a SARS-CoV-2 PCR test, representing 11.3% of the minimum wage (400 USD/month) in Ecuador. During the same period, the cost of a PCR test in Colombia was approximately 50 USD and 60 USD in Peru, values close to 25% of the minimum monthly wage in those countries. The lesson learnt from these facts is that a public health policy devoted to make COVID-19 testing affordable would prevent fake certificates to travel.

In conclusion, by making COVID-19 testing affordable and improving a proactive test certificate screening using simple strategies like QR code scanning with a cell phone at departure airports, even LMICs like Ecuador could contribute to contain COVID-19 spread.

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