

The Role of Telemedicine in Ecuador During the COVID-19 Crisis: A Perspective from a Volunteer Physician

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The Experience

Ecuador is one of the countries with the most cases of COVID-19 by surface area in Latin America. According to The New York Times, the number of COVID-19 cases could be 15 times higher than the statistics cited by the government.¹ The large number of cases that may exist threaten to lead to an oversaturation of the country's healthcare services. In a middle-income country where the availability of emergency rooms is scarce, a pandemic such as this one can be overwhelming since many mild cases of COVID-19 could exhaust the limited healthcare resources available. For this reason, the Ecuadorian Ministry of Public Health has created a crisis call-center and has invited volunteer doctors to join the fight against this pandemic.² I decided to lend a hand during the COVID-19 crisis and immediately volunteered.

The world health organization defines telemedicine as: "the delivery of health care services, where distance is a critical factor, by all health care professionals using information and communication technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries".³ Within these parameters and with current technology, telemedicine can be practiced from several different platforms such as video calls, standard calls, text messages, emails and other online platforms. However, the diagnostic accuracy may vary according to the method used, since receiving a text message will not present the same data as conversing with a patient on the phone or seeing him or her on video.^{4,5} According to the latest survey by the national institute of statistics and censuses, 70.6% of people in Ecuador have a smartphone, 32.7% of people have Internet, 50.1% of people have computers at home and 90.7% have a standard phone.⁶ The Ecuadorian Ministry of Health has proposed the delivery of telemedicine solely via the use of conventional phone calls. This may be a result of the fact that there is greater cellular coverage and because of the limited Internet usage in rural areas. However, this type of physician-patient interaction may significantly decrease the quality of the evaluation when compared to a video call. The objective of telemedicine during this crisis in Ecuador is mainly to perform medical triage and to be able to desaturate the medical systems, for this a telemedicine algorithm has been proposed where 4 possible scenarios are possible: patients who are stable, patients who are stable and have any comorbidity, patients who are critical and, patients who ask about other diseases.

Since I started volunteering, I have faced several difficulties that I have transformed into opportunities.⁷ Being able to assess a patient's condition without a physical examination is challenging, especially since I only recently graduated from medical school. Many patients call with complaints about fever, dyspnea, cough, runny nose, confusion and chest pain and being able to translate these symptoms into a scale of severity or relate them to COVID-19 is complicated, since many of these symptoms may have alternative explanations. For example, chest pain and dyspnea may be secondary to anxiety rather than pneumonia. Some tools that I have used to assess the severity of a patient's complaint is listening to understand if the patient can complete sentences without signs of respiratory distress, teaching relatives to identify the patient's respiratory rate and asking relatives if there is some degree of change in mental status in the patient. These tools can convert subjective details into objective metrics that may help us improve our efforts to triage via the telephone.

One of the main objectives of this hot line is to desaturate the health systems. Therefore, it is necessary to achieve excellent coordination between the emergency systems and telemedicine services to reach this goal and avoid delays when personal attention is necessary.

Telemedicine also has a psychological role during this pandemic. Many people call because they have seen their relatives die and are afraid. The role I have played during these occasions has been to provide psychological support. Additionally, many patients have also chosen to self-medicate, which can be much worse than the disease itself. Some patients have used dangerous pharmacological combinations at toxic dose, including hydroxychloroquine plus azithromycin, which without the proper monitoring or a suitable indication may have a fatal outcome. In this case, the patient education that a doctor can provide can play an important role.

This crisis has allowed for the widespread use of telemedicine in Ecuador. However, due to the lack of coverage and lack of digital education it is not being used in an optimal manner. The difficulties that can be faced in using telemedicine are related to establishing the severity of a patient's condition via subjective means alone. The role that the doctor plays during this crisis is fundamental from an educational, preventive and psychological point of view.

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Editor: Francisco Javier Bonilla-Escobar

Student Editors: David Ben-Nun

Submission: May 5, 2020

Revisions required: May 11, 2020

Received in revised form: May 16, 2020

Acceptance: May 17, 2020

Publication: May 08, 2020

Process: Reviewed by Student Editors

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Acknowledgments

I would like to acknowledge all healthcare professionals, particularly my physician colleagues who are fighting COVID-19 in the rural areas of Ecuador.

Conflict of Interest Statement & Funding

The Author have no funding, financial relationships or conflicts of interest to disclose.

Author Contributions

Conceptualization, Writing – Original Draft Preparation, and Writing – Review & Editing: BN.

Cite as:

Nicolalde B. The Role of Telemedicine on Ecuador During the COVID-19 Crisis: A Perspective from a Volunteer Physician. Int J Med Students. 2020 May-Aug;8(2):154-5.

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ISSN 2076-6327

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