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## Sanitary waste management under Covid-19 restrictions in Ecuador

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Ecuador, with a population of approximately 17.08 million inhabitants, is one of the most COVID-19 affected countries in the world. On March 16<sup>th</sup>, 2020, a countrywide state of exception was declared by the national government, therefore applying measures to restrict mobility, suspension of working hours and closure of borders. This situation caused an increase in the massive demand for masks and gloves as the primary ways to preventing infection. These masks and gloves are single-used and discarded, causing an impact on the environment due to the time they take to decompose. In addition, syringes and other hospital may also become infectious waste.

Although hospitals may comply the regulations for the management and treatment of hazardous solid waste in Ecuador, the health emergency surprised all hospitals, clinics and health centers due to the increase in patients with coronavirus. This situation led to the establishment of new protocols for this type of waste and also for the management of corpses with COVID-19.

Health personnel are the ones that have been most affected during this time, so they have been working on the front line and have been the most exposed to contagion, increasing the use of disposable masks, gloves and gowns and contributing to the increase of waste from hospitals and health centers.

The objective of this study is to investigate and understand how the management of hospital waste has been developed in times of pandemic in the Ecuadorian Institute of Social Security (IESS) Manuel Ignacio Monteros in the city of Loja.

To carry out this study, information are taken from the records and databases generated in the IESS about the amount of hospital waste generated during the months of March to December 2020. Results are obtained making comparisons with the amount of hospital waste generated in the previous year 2019. The information was collected through surveys directed both to medical and administrative personnel who were in direct care of COVID-19 managing operations.

Results show that a considerable increase in the quantity and characteristics of hospital waste generated during the months of analysis was found. Hazardous hospital waste have been managed correctly as established by various protocols and agreements (Ministerial Agreement 0323) in full compliance with current legislation.