Multi-level multi-state modelling applied to hospital admission in mexican patients with COVID-19

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Abstract

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Author summary

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Introduction

The SARS-CoV-2 pandemic was declared a Public Health Emergency of International Concern on January 30, 2020 by the World Health Organization. The Mexican Health Authorithies declared the first lockdown on March 26 with 585 cases and 8 deaths reported for COVID-19 (2); at the end of the lockdown (june 5th 2020) the total cases were 110,026 and 13 170 deaths. Until November 1, Mexico is the fourth country in death rates of SARS-CoV-19 (106,765 deaths), with 1,122,362 incident cases (3).

Over time it has become clear that the presence of comorbidities such as hypertension, diabetes, obesity and smoking are factors that increase the serious illness that leads to hospitalization and in 25% of the cases they required admission and intubation to the intensive care unit (4). Mexico ranks second in obesity among OECD countries, with almost 72.5% obesity among the adult population, which is associated with the high prevalence of type 2 diabetes, estimated at 13% of the adult population in 2017, which is the highest rate among OECD countries (5); hypertension is also one of

the hights chronic diseases among adult population 30% (6). The high prevalence of this comorbidities besides the lack of a functional health care system is believed to be the main reason why the deaths rates in the country are so high

Data used in the modeling comes from the offical database by the Mexican Ministry of Health; the analysis provides of general overview of hospitalizations in each state of the country and the different health institutions withit.

Here are two sample references: [1,2].

Tabla ejemplo

References

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