

Reports monitoring covid-19 pandemic in countries and regions of the Global South
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When a pandemic arrives in the middle of another infectious outbreak

The virus SARS-CoV-2 has already been detected to more than 4.8 Million people out of whom 300,000 have died. Latino American countries reckon on 546,866 reported cases and 30,599 deaths. The virus has turned upside down the scientific and politic world, forcing governments and their administrations to take logistic and organizational decisions on health resources allocation.

As discussed in the previous report, Africa has been living for decades with other communicable diseases that are the leading causes of death on the continent. Latin America, however, has comparatively low mortality from communicable diseases (Figure 1). According to the *Global Burden of Disease*, in 2017 the diseases that cause the most deaths in Latin America were cardiovascular diseases, cancers, diseases of the digestive system and lung infections.

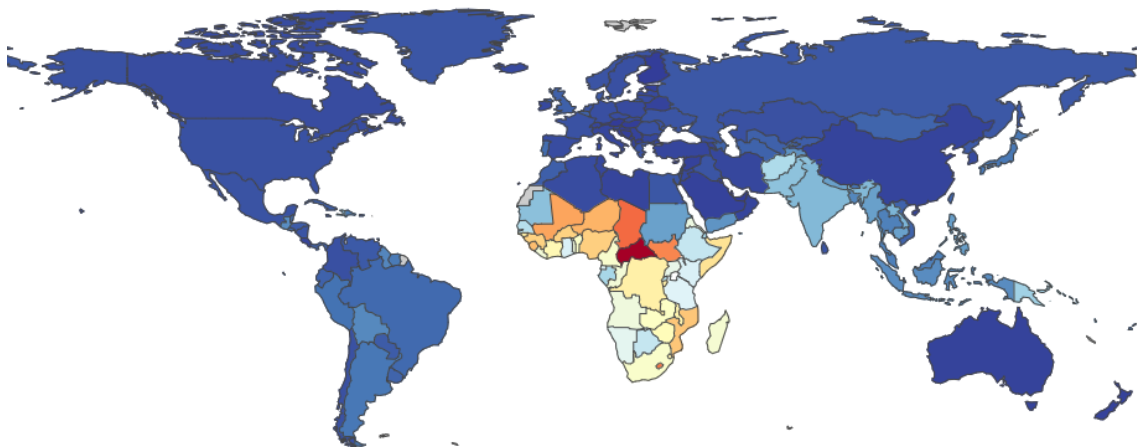


Figure 1. Mortality rate per 100,000 inhabitants based on communicable diseases. Key: high mortality (red), medium-high mortality (orange), medium mortality (white), medium-low mortality (light blue), low mortality (dark blue). Source: Global Burden of Disease, 2017

Yet the mortality and morbidity from communicable diseases in the region cannot be ignored, especially when the new pandemic has arrived in the midst of one of the worst dengue fever outbreaks in history and a time when the region is still reeling from the consequences of the 2016 Zika epidemic.

Data from the *Pan American Health Organization* indicates than in 2019 the Latin American region had more than 3 Million dengue infections and 1,500 deaths (PAHO, 2020). Dengue fever as well as Zika and chikungunya, are viral infectious diseases transmitted through the bite of the vector mosquito *Aedes aegypti*. The mosquito lays its eggs in shallow containers with water in a space sheltered from the wind such as around or inside houses, parks and public gardens. If

these spaces are neglected and prevention measures are not taken, mosquito breeding proliferates and thus the disease.

Dengue fever has four viral strains and zika and chikungunya are from the same family as these strains. When a person is bitten by one of these viral strains, they usually have medium or mild symptoms and become immune to this particular strain. However, if subsequently bitten by another strain or by zika or chikungunya the reaction can be fatal, developing the so-called severe dengue or haemorrhagic dengue. Treatment of severe dengue must be done through intravenous fluid and with hospital assistance. In recent weeks, however, several witnesses have told the newspaper *La Nación* in Argentina that they did not go to the hospital despite being suspected of having dengue for fear of contracting covid-19 or that if they did go they could not be treated due to the over-saturation of the services. Similarly, the Argentine newspaper *Página 12* explains the experience of a witness who was treated directly as if she had covid-19 when in fact she had dengue. This had consequences on her symptoms and mental health.

Several countries in the region, such as Paraguay, Brazil and Bolivia, declared a high incidence of dengue fever in January 2020. Brazil, the country with the highest incidence of covid-19, with 255,368 cases and 16,941 deaths (19 May 2020) reported in the *Brazilian Ministry of Health's* epidemiological report of 30th April: 639,608 cases of dengue fever and 241 deaths (216 more under investigation), 22,786 cases of chikungunya and 4 deaths (18 more under investigation) and 2,058 cases of Zika.

Zika infections in pregnant women in the first months of pregnancy can cause microcephaly to the new born baby. Microcephaly is a congenital defect in the baby's head (and often the brain as well) which is smaller than what it should be. After the 2016 Zika outbreak, many babies in impoverished areas of Brazil were born with microcephaly. Researchers at the *Health Science Centre of the Federal University of Rio de Janeiro* have shown that not only Zika caused an increase in the incidence of microcephaly but also demographic and environmental factors. These factors include the low socio-economic level of the population, the lack of health coverage, the low capacity of mobilization that the population has and the deteriorated urban infrastructure which promotes the reproduction of the vector mosquito. Public health actions at different levels (community, accessibility to health services, infrastructure) are therefore necessary to prevent the emergence of new cases of microcephaly (Amaral, 2019).

Turning to dengue fever, Argentina at the beginning of May 2020 recorded 32,223 cases and 24 deaths (11 more under investigation) compared to 1,153 at the same time last year. Nicolás Schweigmann, director of the *Mosquito Study Group at the Faculty of Natural Sciences of the University of Buenos Aires*, says that this increase in incidence is due to the neglect of mosquito breeding prevention since the outbreak of Zika in 2016. Dengue prevention includes replacing the water in the water troughs, the correct disposing of containers that accumulate liquids, maintaining chlorinated swimming pools, using mosquito repellent and long-sleeved clothing.

Epidemiologist Josefina Coloma, a researcher at the *School of Public Health at the University of California*, explains in the newspaper *Primicias* from Ecuador that it is possible that some deaths reported as covid-19 are in fact dengue's deaths given the similarity in the symptomatology. Up to mid-March the country reported 888 cases of dengue but since the arrival of covid-19 up to

beginning of May only 180. The researcher argues that this decline is not possible in the current phase of the epidemic (historically the cases decline in early July) and that it is due to the collapse of the health system that has stopped reporting cases.

The lack of services and infrastructures for other diseases has also been noted among respiratory diseases. Argentina registered 110,712 cases of flu-like illnesses at the beginning of May, 45% fewer than last year on the same date. *The Ministry of Health of Argentina* reports in its Integrated Surveillance Bulletin Nº 495 that this decrease in case reporting is due to the reduced availability of facilities to detect and report diseases other than covid-19.

The health services available in Latin America are unfortunately limited and have to deal with different infectious diseases at the same time. In this report we have mentioned a small number of these, but the region coexists with many neglected diseases that affect mainly the poorer population. The covid-19 pandemic has come at a stroke and with a high infectivity. However, we must continue making prevention actions for the already existing infectious diseases as well as guarantee health centres services for the detection and treatment of these diseases.

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The research group BIOCOS-SC from the Polytechnic University of Catalonia is in contact with different research groups and governmental offices in order to jointly predict the evolution of the pandemic covid-19. Moreover, we follow up local media in 35 African countries and 9 Latino American countries and complemented it with interviews to field experts.

<https://biocomsc.upc.edu/en/covid-19>