



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



Correspondence

COVID-19 data sources in Latin America and the Caribbean



Dear Editor,

The COVID-19 pandemic has affected Latin America and the Caribbean (LAC) [1], where due to lack of resources, some countries are facing difficulties to implement screening/testing strategies for large populations, or to provide care for severe cases (e.g., mechanical ventilation). Under these circumstances, data are paramount for governments to make informed decisions; for academics to conduct research and modelling studies; and for the general public to learn about the local/global progression of the pandemic.

Understanding the global need for data, international organizations and academic institutions provide daily numbers of COVID-19 cases, recoveries and deaths [2]. However, data with greater details are needed to better understand the local/regional profile of the pandemic, not to mention the clinical profile of the cases and deceased. Because global endeavours cannot report all these data, local authorities should make efforts to report as much data as possible (meeting legal, ethical and de-identification standards). This way, independent researcher can (re-)analyse these data and provide outputs relevant for stakeholders and lay people. Moreover, researchers can start regional collaborations to enhance their skills and knowledge, and to pool data to increase statistical power and reduce uncertainty. Research at the regional level can inform and advance the COVID-19 evidence benefiting populations beyond borders; also, this can provide evidence for regional organizations (e.g., Pan-American Health Organizations) to make recommendations as countries in LAC implement strategies of social distancing, and to avoid a second wave once these strategies are over.

Because LAC has not had a strong data pooling history [3], and the first barrier to use data from multiple sources is knowing where these data are, this letter provides a list of official data sources for 31 countries and territories in LAC (Table 1). This work aims to inform the LAC clinical and scientific community about official data sources with greater granularity so that regional research can start.

This list assumes that these government-based data sources reflect truthful, accurate and current information, which may not be the case for several reasons. First, logistic and human resources may not be available to update these data daily; second, the country capacity to identify potential patients, test, and report results may be limited thus affecting data availability; third, although speculative, governments may not want to report all available information transparently [4].

Some countries provide visualizations with numbers/proportions by gender, age and city/region (e.g., Peru). Some countries provide reports

Table 1

COVID-19 data sources by country in Latin America and the Caribbean.

| Country | Website |
|------------------------|---|
| South America | |
| Argentina | https://www.argentina.gob.ar/coronavirus/informe-diario |
| Bolivia | https://www.boliviasegura.gob.bo/datos-oficiales |
| Brazil | https://covid.saude.gov.br/ |
| Chile | https://www.gob.cl/coronavirus/cifrasoficiales/ |
| Central America | |
| Colombia | https://www.ins.gov.co/Noticias/Paginas/Coronavirus.aspx |
| Ecuador | https://www.coronavirusecuador.com/ https://www.gestionderiesgos.gob.ec/informes-de-situacion-covid-19-desde-el-13-de-marzo-del-2020/ |
| Paraguay | https://www.mspbs.gov.py/covid-19.php http://vigisalud.gov.py/page/#vista_boletines_covid19.html |
| Peru | https://covid19.minsa.gob.pe/ |
| Uruguay | https://www.gub.uy/sistema-nacional-emergencias/comunicacion/noticias/informacion-interes-actualizada-sobre-coronavirus-covid-19-uruguay |
| Venezuela | http://www.mpps.gob.ve/ https://covid19.patria.org.ve/estadisticas-venezuela/ |
| Costa Rica | https://www.ministeriodesalud.go.cr/index.php/centro-de-prensa/noticias/741-noticias-2020/1532-lineamientos-nacionales-para-la-vigilancia-de-la-infeccion-por-coronavirus-2019-ncov http://geovision.uned.ac.cr/oges/ |
| El Salvador | https://covid19.gob.sv/ |
| Guatemala | https://www.mspas.gob.gt/index.php/noticias/coronavirus-2019-ncov |
| Honduras | http://www.salud.gob.hn/site/ |
| Mexico | https://www.gob.mx/salud/documentos/datos-abiertos-152127?idiom=es https://www.gob.mx/salud/documentos/coronavirus-covid-19-comunicado-tecnico-diario-238449 https://www.gob.mx/salud/documentos/informacion-internacional-y-nacional-sobre-nuevo-coronavirus-2019-ncov |
| Panama | http://minsa.gob.pa/coronavirus-covid19 |
| The Caribbean | |
| Anguilla | http://gov.ai/covid.php |
| Antigua and Barbuda | https://ab.gov.ag/detail_page.php?page=42 |

(continued on next page)

Table 1 (continued)

| | |
|-------------------------------|--|
| Barbados | https://gisbarbados.gov.bb/covid-19/ |
| British Virgin Islands | https://bvi.gov.vg/covid-19 |
| Cuba | https://salud.msp.gov.cu/?cat=839 |
| Dominica | http://dominica.gov.dm/corona |
| Dominican Republic | https://www.msp.gov.do/web/Transparencia/publicaciones-oficiales/#1581015902933-aa1d7cea-38d6 |
| Montserrat | http://www.gov.ms/latest-on-the-coronavirus/ |
| Puerto Rico | http://www.salud.gov.pr/Pages/coronavirus.aspx https://bioseguridad.maps.arcgis.com/apps/opsdashboard/index.html#/3bf64c9a91944bc8c41edd8ff27e6df |
| Saint Maarten | http://www.sintmaartengov.org/government/VSA/Health-Updates/NOVELCORONAVIRUS/Pages/Current-Situation.aspx |
| Saint Martin | http://www.com-saint-martin.fr/Plateforme%20riposte%20codiv19%20_Saint-Martin-Antilles_2032.html |
| Saint Lucia | https://www.covid19response.lc/ |
| St Vincent and the Grenadines | http://health.gov.vc/health/index.php/c |
| US Virgin Islands | https://doh.vi.gov/covid19usvi |
| Trinidad and Tobago | https://uwi.maps.arcgis.com/apps/opsdashboard/index.html#/67c3cc49334549868aad02659d91564 |

At this time, comparisons about mortality rates may not be accurate, because definitions to ascertain mortality due to COVID-19 may not be standard across countries. Websites with a.gob/.gov.X extension were selected (where X is country in Latin America and the Caribbean; e.g., .gob.pe), or those directly linked from government websites. Links were accessed on April 10, 2020. Mexico was grouped in Central American because of geographic proximity.

summarizing the information (e.g., Argentina), while others allow to download data in spreadsheets (e.g., Brazil, Colombia, Chile and Mexico). This suggests countries are at a different stage of the data transition, understood as how they can collect/collate, organize, distribute, visualize and share data. This opens opportunities for professionals with data training to collaborate with local/regional institutions and governments to enhance data analysis to inform decisions and policies, as a general practice and during the COVID-19 pandemic.

Declaration of competing interest

The author declares that he has no competing interests.

Acknowledgement

I wish to express my gratitude to researchers in LAC who helped identifying the selected websites. RMC-L has been supported by a Strategic Award, Wellcome Trust-Imperial College Centre for Global Health Research (100693/Z/12/Z), and Imperial College London Wellcome Trust Institutional Strategic Support Fund [Global Health Clinical Research Training Fellowship] (294834/Z/16/Z ISSF ICL). RMC-L is supported by a Wellcome Trust International Training Fellowship (214185/Z/18/Z). The funder had no role in this work and decision to submit for publication.

References

- [1] Rodriguez-Morales AJ, Gallego V, Escalera-Antezana JP, et al. COVID-19 in Latin America: the implications of the first confirmed case in Brazil. *Trav Med Infect Dis* 2020;101613.
- [2] Dong E, Du H, Gardner L. An interactive web-based dashboard to track COVID-19 in real time. *Lancet Infect Dis* 2020.
- [3] Carrillo-Larco RM, Demaio AR, Miranda JJ. Addressing NCDs: is it really a global coalition? *Lancet* 2013;381(9883):2081. discussion -2.
- [4] Paniz-Mondolfi AE, Sordillo EM, Marquez-Colmenarez MC, Delgado-Noguera LA, Rodriguez-Morales AJ. The arrival of SARS-CoV-2 in Venezuela. *Lancet* 2020;395(10236):e85-6.

Rodrigo M. Carrillo-Larco
*Department of Epidemiology and Biostatistics, School of Public Health,
 Imperial College London, London, UK
 CRONICAS Centre of Excellence in Chronic Diseases, Universidad Peruana
 Cayetano Heredia, Lima, Peru*
 E-mail addresses: rcarrill@ic.ac.uk, rodrigo.carrillo@upch.pe.