



COVID-19 AND URBAN HEALTH IN LATIN AMERICA AND THE CARIBBEAN

A Challenge for Urban Health and Health Equity



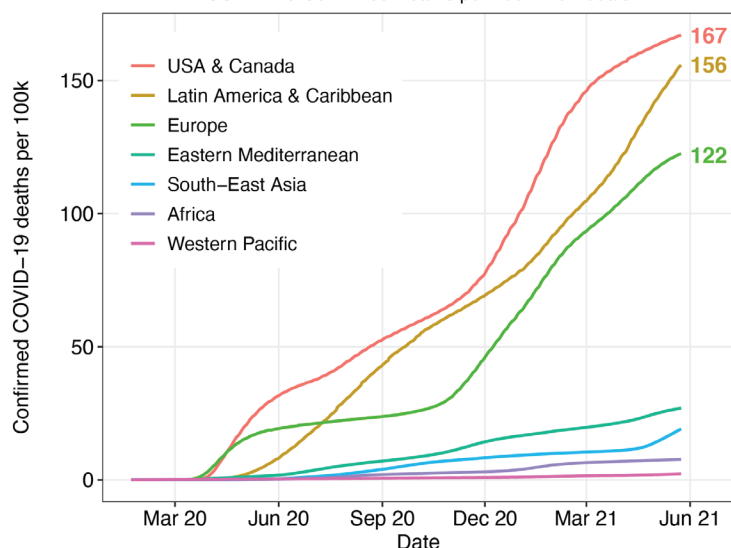
Photo credit: Victor Idrogo/ Banco Mundial

Key Messages

- The Latin America and Caribbean (LAC) region is one of the world regions hardest hit by the pandemic
- Many cities in the region have been especially vulnerable. Very high levels of inequality have influenced the impact of the pandemic on cities of the region.
- The pandemic has evidenced the lack of robust public health systems, limits of social safety nets, and challenges in implementing evidence-based public health policies.
- Limited access to vaccination is a critical challenge to the region's recovery.
- The pandemic can create opportunities to improve public health in the region.

The Latin America and Caribbean (LAC) region is one of the world regions hardest hit by the pandemic.

Figure 1.
COVID-19 Confirmed Deaths per 100K Individuals



COVID-19 death rates in selected countries, May 1-24 2021.

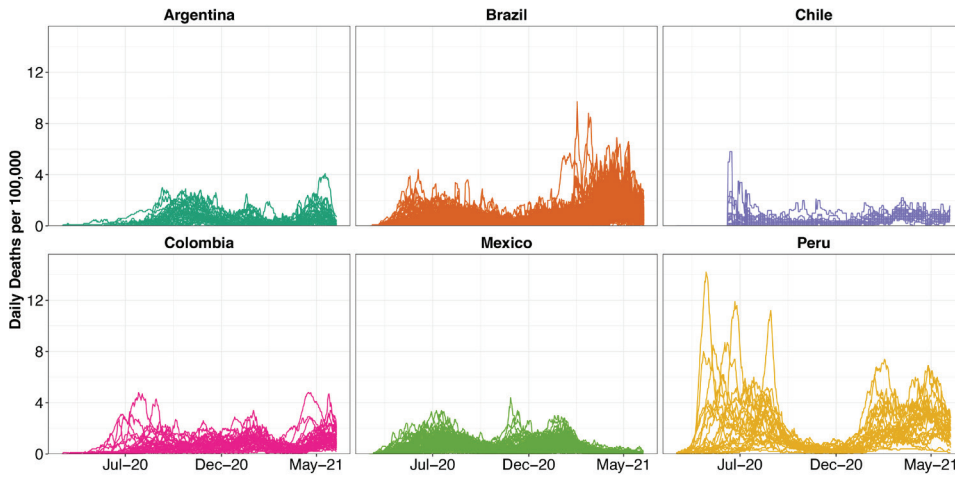
Country	COVID-19 deaths per million
Uruguay	361
Paraguay	280
Argentina	230
Colombia	220
Brazil	204
Peru	199
Costa Rica	121
Chile	109
Mexico	35
India	66
France	61
United States	40
United Kingdom	3

Key Findings

- The cumulative death rate (through June 1 2021) is the second highest of all regions, very close to that observed in US/Canada, the region with the highest cumulative death rate to date, despite the fact that the LAC region has a much younger population than the US/Canada and Europe.
- In May 2021, COVID death rates in countries of the region were among the highest in the world.
- Under-reporting of COVID deaths in LAC is likely significant.^{3,4} For example, in May 2021 it was estimated that COVID-19 deaths in Peru were twice as many as was previously estimated.⁵

Many cities in the region have been especially vulnerable. Very high levels of inequality have influenced the pandemic's impact on cities of the region.

Figure 2: Death Rates for SALURBAL cities by Country

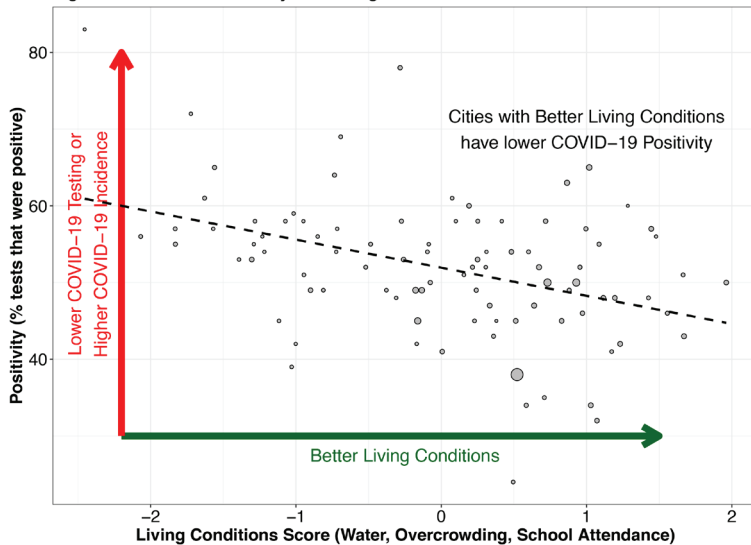


Source figure 2: SALURBAL Tracks COVID⁶

Key Findings

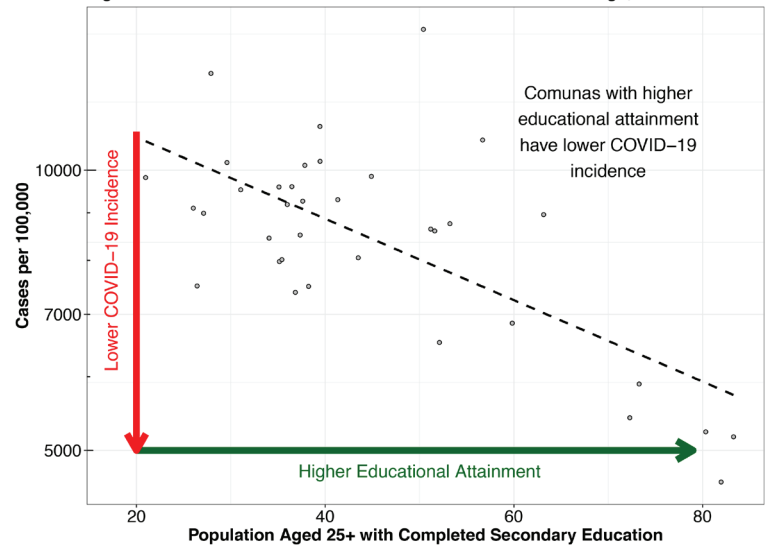
- Cities have been hard-hit by the pandemic. Among the SALURBAL countries, cities in Argentina, Colombia, Peru and Brazil have the highest death rates in recent months (April and May 2021).
- Cities with better social and economic conditions tend to have lower disease risk.
- Within cities, neighborhoods with better social and economic conditions tend to have lower disease risk.

Figure 3: COVID-19 Positivity and Living Conditions in 92 Cities of Mexico



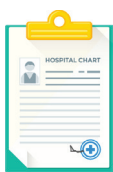
Source figure 3: SALURBAL Tracks COVID⁶

Figure 4: COVID-19 Incidence & Education in Comunas of Santiago, Chile



Source figure 4: SALURBAL Tracks COVID⁶

The pandemic has evidenced the lack of robust public health systems, limits of social safety nets, and challenges in implementing evidence-based public health policies.



Who counts and who doesn't?

- Limited access to testing has made it difficult to systematically track incidence and may have hampered prevention efforts.
- Pre-existing difficulties related to under-registration of deaths and problems in accurately assigning causes of deaths have made it difficult to characterize the true mortality impact.^{3,4}
- Under-diagnosis of cases and under-registration of deaths is concentrated among groups and territories with lower socioeconomic status. This together with lack of socioeconomic and race/ethnic information linked to cases and deaths has led to underestimates of inequalities and has hampered prevention efforts.

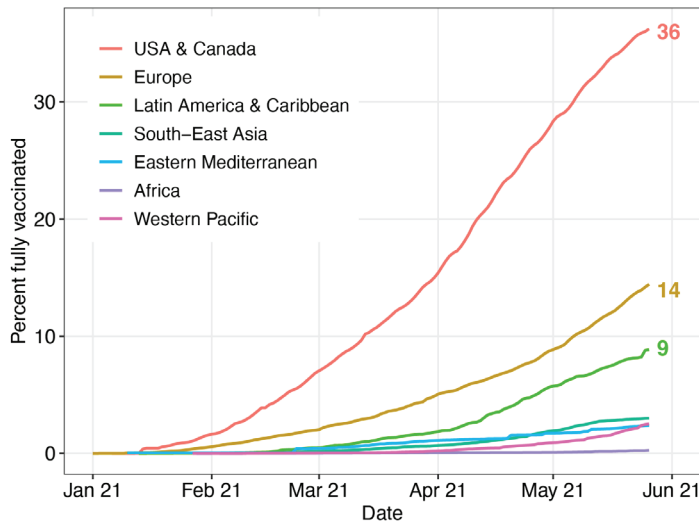
The Response to the Pandemic

- The pandemic has highlighted weaknesses in health care systems (limited access and resources, poor quality, lack of coordination) as well as in public health infrastructure and human resources related to disease surveillance, case identification, contact tracing, public health communications, and pandemic preparedness.⁸
- High pre-existing levels of poverty, unemployment and informal work as well as limited unemployment benefits, sick leave and other income support policies have magnified the health, social and economic impacts of the pandemic and limited the impact of lockdowns and other measures on disease transmission.⁸ An additional 22 million people have been forced into poverty by the pandemic in the region.⁹
- The pandemic has also exacerbated existing gender gaps and deepened the already vulnerable situation of women and girls in Latin America and the Caribbean including the toll of gender-based violence.¹⁰ It has also contributed to other pre-existing health problems including the burden of non-communicable diseases and mental illness.
- In some countries political leaders and others have perpetuated misinformation.¹¹ This has contributed to confusion and distrust¹² magnifying the health and social consequences of the pandemic.

Limited access to vaccination is a critical challenge to the region's recovery.

Figure 5.

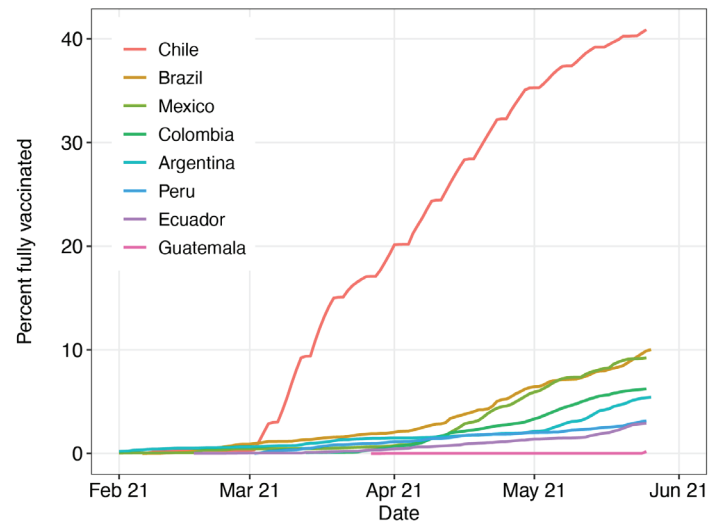
COVID-19: Percent of Population Fully Vaccinated



Source figure 5: Vaccination data from the COVID-19 Data Explorer by Our World in Data¹³; population data from the United Nations²; world regions are based on modified WHO regions.

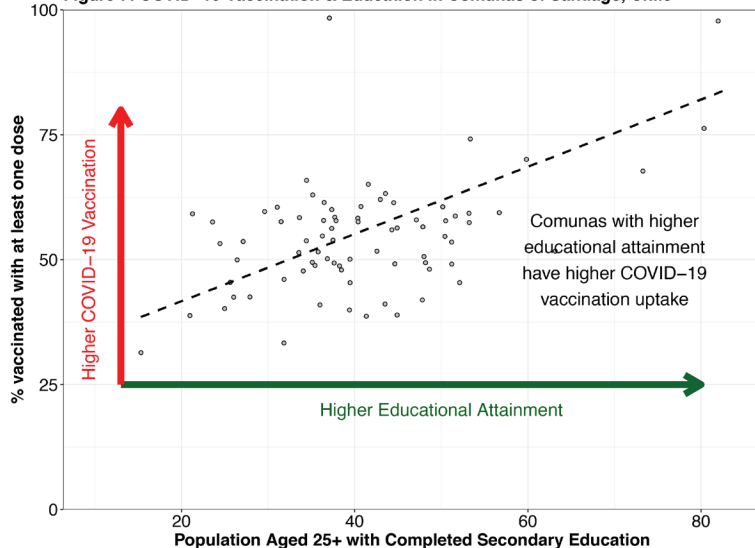
Figure 6.

COVID-19: Percent of Population Fully Vaccinated



Source figure 6: Vaccination data from the COVID-19 Data Explorer by Our World in Data¹³; population data from the United Nations.²

Figure 7: COVID-19 Vaccination & Education in Comunas of Santiago, Chile



Source figure 7: Ministerio de Ciencia, Chile¹⁴

Key Findings

- Vaccination rates for the region remain low.
- With the exception of Chile, the percent of the population fully vaccinated remains below 10% and even below 5% in many countries.
- Vaccine access is strongly patterned by social and economic conditions (even in Chile with relatively high vaccination coverage), further magnifying health inequities.
- Efforts are underway to produce vaccines in the region. Many countries are dependent on COVAX which has experienced significant challenges.¹⁵

The pandemic can create opportunities to improve public health in the region.



Photo credit: Victor Idrogo/ Banco Mundial

- Many countries implemented social protection programs in response to the economic consequences of the pandemic. These actions can form the basis of more fundamental and long-term initiatives to reduce inequality and expand social safety nets including improving conditions for informal workers and guaranteeing universal social protection,^{9,16} all of which are likely to have major public health benefits beyond the pandemic.
- Data systems related to tracking the pandemic (cases and deaths) have improved over time in some countries setting the groundwork for structural changes to improve health statistics and use of health data for policy in LAC.
- The pandemic has highlighted the need for universal comprehensive government guaranteed health care access in the region as well as the need for investments in public health infrastructure, community health, and pandemic preparedness. For example the fast progress in vaccination in Chile illustrates how a well-established public health system (Chile's national vaccination program has high coverage and dates back to 1978) can have a significant impact.
- The pandemic has motivated renewed thinking about urban policies related to housing and built environments, as well transportation, including opportunities to reduce overcrowding and promote active travel, reduce automobile use, and improve air quality in cities.¹⁷⁻²⁰ COVID19 has made more visible than ever the precarious living conditions of low income urban dwellers and the need for urban policies that reduce inequities across people and neighborhoods.

References

1. Dong E, Du H, Gardner L. An interactive web-based dashboard to track COVID-19 in real time. *The Lancet infectious diseases*. 2020;20(5):533-534.
2. United Nations, Department of Economic and Social Affairs, Population Division. *World Population Prospects 2019*, Online Edition. Rev. 1. Published 2019. Accessed June 9, 2021. <https://population.un.org/wpp/Download/Standard/Population/>
3. Luis Felipe López-Calva. A greater tragedy than we know: Excess mortality rates suggest that COVID-19 death toll is vastly underestimated in LAC. Director's Blog: Graph For Thought (UNDP). Published July 7, 2020. Accessed June 9, 2021. <https://www.latinamerica.undp.org/content/rblac/en/home/prescenter/director-s-graph-for-thought-a-greater-tragedy-than-we-know-excess-mortality-rates-suggest-ctml>
4. Carvalho TA, Boschiero MN, Marson FAL. COVID-19 in Brazil: 150,000 deaths and the Brazilian underreporting. *Diagn Microbiol Infect Dis*. 2021;99(3):115258. doi:10.1016/j.diagmicrobio.2020.115258
5. Grant W. Covid: Peru more than doubles death toll after review. *BBC News*. <https://www.bbc.com/news/world-latin-america-57307861>. Published June 1, 2021. Accessed June 9, 2021.
6. Li R, Bilal U. SALURBAL Tracks COVID-19. Urban Health Network for Latin America and the Caribbean. Published September 29, 2020. Accessed June 9, 2021. <https://drexel.edu/lac/data-evidence/covid-19/salurbal-tracks-covid-19/>
7. Bilal U, Alfaro T, Vives A. COVID-19 and the worsening of health inequities in Santiago, Chile. *International Journal of Epidemiology*. Published online 2021.
8. OECD. COVID-19 in Latin America and the Caribbean: An Overview of Government Responses to the Crisis; 2020. Accessed June 9, 2021. <https://www.oecd.org/coronavirus/policy-responses/covid-19-in-latin-america-and-the-caribbean-an-overview-of-government-responses-to-the-crisis-0a2de41/>
9. Barcena A. Pandemic Prompts Rise in Poverty to Levels Unprecedented in Recent Decades and Sharply Affects Inequality and Employment. Text presented at the: March 4, 2021; Economic Commission for Latin America and the Caribbean. Accessed June 9, 2021. <https://www.cepal.org/en/pressreleases/pandemic-prompts-rise-poverty-levels-unprecedented-recent-decades-and-sharply-affects>
10. Bergallo P, Mangini M, Magnelli M, Bercovich S. The Impacts of COVID-19 on Women's Economic Autonomy in Latin America and the Caribbean. UN Women, UNDP; 2021. Accessed June 9, 2021. https://www.latinamerica.undp.org/content/rblac/en/home/library/womens_empowerment/los-impactos-del-covid-19-en-la-autonomia-economica-de-las-mujer.html
11. Editorial. India, Brazil and the human cost of sidelining science. *Nature*. 2021;593(7857):7-8. doi:10.1038/d41586-021-01166-w
12. OECD. Transparency, Communication and Trust: The Role of Public Communication in Responding to the Wave of Disinformation about the New Coronavirus - OECD. OECD; 2020. Accessed June 9, 2021. https://read.oecd-ilibrary.org/view/?ref=135_135220-cvba4lq3ru&title=Transparency-communication-and-trust-the-role-of-public-communication-in-responding-to-the-wave-of-disinformation-about-the-new-coronavirus&_ga=2.97076825.738249409.1622470544.1002464590.1622470544
13. Mathieu E, Ritchie H, Ortiz-Ospina E, et al. A global database of COVID-19 vaccinations. *Nat Hum Behav*. Published online May 10, 2021. doi:10.1038/s41562-021-01122-8
14. Ministerio de Ciencia - Chile. Mesa de Datos COVID-19. Published June 9, 2021. Accessed June 9, 2021. <https://github.com/MinCiencia/Datos-COVID19>
15. WHO. COVAX updates participants on delivery delays for vaccines from Serum Institute of India (SII) and AstraZeneca. Published March 25, 2021. Accessed June 9, 2021. [https://www.who.int/news/item/25-03-2021-covax-updates-participants-on-delivery-delays-for-vaccines-from-serum-institute-of-india-\(sii\)-and-astrazeneca](https://www.who.int/news/item/25-03-2021-covax-updates-participants-on-delivery-delays-for-vaccines-from-serum-institute-of-india-(sii)-and-astrazeneca)
16. OECD Latin America & the Caribbean Regional Programme. Informality & Social Inclusion in the Times of COVID-19: Conclusions and Policy Considerations from the OECD-LAC Virtual Social Inclusion Ministerial Summit; 2020. Accessed June 9, 2021. <https://www.oecd.org/latin-america/events/lac-ministerial-on-social-inclusion/LAC-Ministerial-2020-Conclusions-and-Policy-Considerations.pdf>
17. Kephart JL, Avila-Palencia I, Bilal U, Gouveia N, Caiiffa WT, Roux AVD. COVID-19, ambient air pollution, and environmental health inequities in Latin American cities. *Journal of Urban Health*. Published online 2021:1-5.
18. Leon JP. Pedalear contra la pandemia. *El Comercio.pe*. Published April 2020. Accessed June 9, 2021. <https://especial.escomercio.pe/?q=especial/espedalear-contra-la-pandemia-ecpm/index.html>
19. Ordaz Diaz A. CDMX apuesta por el uso de la bicicleta en la nueva normalidad. *Forbes Mexico*. <https://www.forbes.com.mx/noticias-cdmx-uso-bicicleta-nueva-normalidad/>. Published June 3, 2020. Accessed June 9, 2021.
20. Fernández O, González Luacy C. Mejor en dos ruedas: ante aumento de viajes en bicicleta, comuna de Santiago estrena "ciclosendas." *La Tercera*. Published June 26, 2020. Accessed June 9, 2021. <https://www.latercera.com/nacional/noticia/mejor-en-dos-ruedas-ante-aumento-de-viajes-en-bicicleta-comuna-de-santiago-estrena-ciclosendas/BE17BGVSKBNGDGTCSZYDER7JA/>

For additional information on COVID-19 outcomes in SALURBAL cities visit SALURBAL Tracks COVID-19 at:
<http://drexel.edu/lac/data-evidence/covid-19/salurbal-tracks-covid-19/>

This document was written by: Ana V. Diez Roux¹, Usama Bilal¹, Josiah L. Kephart¹, Tonatiuh Barrientos², Waleska Caiiffa³, Francisco Diez Canseco⁴, Daniel Rodriguez⁵, Olga Lucia Sarmiento⁶, Claire Slesinski¹, Alejandra Vives Vergara⁷

Designed by: Andrea Bolinaga¹ and Sarah Greer¹

Translated by: José Tapia Granados¹



LAC-URBAN HEALTH
Urban Health Network for Latin America and the Caribbean






1. Dornsife School of Public Health, Drexel University, United States
2. National Institute of Public Health, Mexico
3. Federal University of Minas Gerais, Brazil
4. Universidad Peruana Cayetano Heredia, Peru
5. University of California – Berkeley, United States
6. University of the Andes, Colombia
7. School of Medicine, Pontifical Catholic University of Chile, Chile

Salud Urbana en América Latina (SALURBAL), Urban Health in Latin America, is a project that studies how urban environments and urban policies impact the health of city residents throughout Latin America. SALURBAL's findings inform policies and interventions to create healthier, more equitable, and more sustainable cities worldwide. SALURBAL is funded by the Wellcome Trust.

More information about LAC-Urban Health and SALURBAL

www.lacurbanhealth.org

Social Media: @lacurbanhealth   

lacurbanhealth@drexel.edu

The Urban Health Network for Latin America and the Caribbean (LAC-Urban Health) seeks to promote regional and multisectoral collaboration in order to generate evidence on the drivers of urban health and health equity and translate this evidence into policies to improve health across cities in Latin America and the Caribbean.