

The Private Management of Public Hospitals Can Save Lives. Evidence from Hospital Israelita Albert Einstein during the COVID-19 Pandemic in Brazil

HEALTHCARE AND COVID-19 IN BRAZIL

Over the last two decades, private sector involvement in providing public healthcare infrastructure and services has increased globally, including in Brazil. Municipalities and states often engage with private hospitals to deliver services under the country's public *Sistema Único de Saúde*. In 2019, only 38% of the country's 474,000 hospital beds were in public hospitals.

The COVID-19 pandemic heavily strained Brazil's healthcare system. The number of cases per 1,000 people was higher than in Organisation for Economic Cooperation and Development (OECD) countries and the number of beds (2.3) per 1,000 people was roughly half the OECD average. During the first year of the pandemic, Brazil recorded nearly 7 million cases and 181,000 deaths, one of the highest figures globally, both in absolute terms and relative to its population. The State of São Paulo alone had more than 1.3 million cases and almost 44,000 deaths.¹

The COVID mortality rate in public hospitals was higher than in private hospitals. According to the Brazilian Association of Intensive Care Medicine (*Associação de Medicina Intensiva Brasileira*), between March 1 and May 15, 2020, patients admitted to an intensive care unit (ICU) for COVID-19 in public hospitals were twice as likely to die as those in private ones. The difference in mortality rates can mainly be explained by delays in accessing health assistance, which increases the severity of patients arriving for treatment, as well as other potential socioeconomic factors.

CRISIS RESPONSE: HOSPITAL ISRAELITA ALBERT EINSTEIN

Hospital Israelita Albert Einstein (Einstein)—a private, non-profit organization that operates a network of public and private hospitals in Brazil—played a vital role in responding to the pandemic in São Paulo.

In December 2019, in anticipation of the looming health crisis, it started purchasing medical equipment (ventilators, monitors, etc.), building new and adapting existing facilities, investing in testing technologies, and hiring and relocating medical staff, among other activities.² These investments allowed Einstein to quickly transform regular beds into ICU beds to prepare for the surge, reinforce teams, and expand care structures.³ More specifically, Einstein invested in the two public hospitals under its management in São Paulo: Hospital Municipal M'Boi Mirim and Hospital Municipal Vila Santa Catarina. It also established an emergency care unit (Unidade de Pronto Atendimento), implemented two field hospitals (Morumbi and Pacaembu Temporary Hospitals), and erected two screening tents at the emergency care units. With these investments, Einstein increased the number of available beds by 63%, from 423 to 1,146. In addition, Einstein increased the number of ICU beds to 180 at Hospital Municipal M'Boi Mirim and 59 beds at Hospital Municipal Vila Santa Catarina.

In November 2020, as part of its crisis response in the region, IDB Invest provided a R\$200 million loan (approx. US\$38 million) to Einstein to finance and reimburse expenditures related to its pandemic-related investments in infrastructure, medical equipment, and research on testing technologies, among others. In addition to financing, IDB Invest provided technical assistance to generate evidence about the impact of the hospital's actions on health outcomes in São Paulo during the COVID-19 crisis, as summarized in this DEBrief.

THE EFFECT OF EINSTEIN-MANAGED PUBLIC HOSPITALS ON COVID-19 MORTALITY RATES

An IDB Invest study compared the mortality rates of COVID-19 patients treated in Einstein-managed public hospitals to those of patients treated in other public hospitals in the City of São Paulo.⁴ The study used a rich dataset that included nearly 54,000 confirmed COVID-19 cases among residents who were hospitalized in public hospitals between March 2020 and December 2021.⁵ About 7% of these admissions were in public hospitals managed by Einstein.⁶



DEBrief

SUSTAINABLE DEVELOPMENT GOALS



- **Hospital Israelita Albert Einstein**, which operates a network of public and private hospitals in Brazil, played a vital role in responding to the COVID-19 pandemic in São Paulo.
- **Together with Einstein**, an IDB Invest study compared the mortality rates of COVID-19 patients treated in Einstein-managed public hospitals to those of patients with similar characteristics treated in other public hospitals in São Paulo.
- **The results show that Einstein-managed public hospitals had significantly lower mortality rates during the COVID-19 pandemic**, particularly during the second wave of the disease and when bed occupancy rates were highest.
- **These results underscore the effectiveness and resilience of Einstein's management strategies in coping with the pandemic**, particularly during periods of peak strain on the healthcare system. They also signal the potential application of learning from the first wave leading to better outcomes in the second wave.
- **The data also shows that Einstein-managed public hospitals followed different practices than other public hospitals**, using more mechanical ventilators, admitting more patients to the ICU, and hospitalizing patients for longer.
- **Einstein also increased its scientific production during the pandemic**, including more publications, authors, and collaborative networks, particularly in respiratory research.



1. [Brasil.IO COVID-19 database](#).
 2. [Albert Einstein Sustainability Report 2020](#), page 23.
 3. [Albert Einstein Sustainability Report 2021](#).
 4. The study did not analyze mortality rates at Einstein's private hospital.
 5. Data from the *Sistema de Vigilância Epidemiológica da Gripe (SIVEP-Gripe)*.
 6. Including the two public hospitals managed by Einstein and its two temporary hospitals.

To rule out the possibility that Einstein-managed public hospitals treated less severe cases, the study separated the effects of the treatment received at these hospitals from other factors that affect mortality, such as pre-existing health conditions, symptoms present at the time of hospitalization, and socioeconomic status. This is important because the simple comparison of mortality rates between Einstein-managed hospitals and other public hospitals might reflect differences among patients and not necessarily the effectiveness of the treatment received. In fact, patients treated in the two Einstein-managed hospitals had worse prospects on average due to pre-existing conditions or severity of symptoms when they were hospitalized.

Similarly, extensive medical research has identified a strong link between high strain on hospital capacity and elevated mortality rates. Therefore, to see how Einstein-managed public hospitals fared in terms of death rates when their capacity was stretched, the study used the city's ICU bed occupancy rate as a measure of healthcare system saturation.⁷ This data shows two prominent peaks in bed occupancy in May 2020 and March-April 2021, coinciding with the first two waves of the pandemic.

The findings show that Einstein-managed public hospitals had significantly lower mortality rates than other public hospitals during times of high stress on the healthcare system. In effect, 70 lives were saved between March 2020 and December 2021 in these hospitals (Figure 1). This refers to the number of people who would have died if they had been admitted to one of the other public hospitals, not the number of patients recovering from COVID-19 in Einstein-managed public hospitals. While the mortality rates of Einstein-managed public hospitals were also lower when the healthcare system was less strained, these results were not statistically significant.

These results underscore the effectiveness and resilience of Einstein's management strategies in coping with the challenges posed by the pandemic, particularly during periods of peak strain on the healthcare system.

The study also separately estimated the effects on mortality in 2020 and 2021, the pandemic's first and second waves. The results confirm that the reduction in mortality was significant when the healthcare system occupancy rate was elevated, but the effect was only statistically significant in 2021. This finding might signal that learning from the first wave informed actions taken by Einstein to improve outcomes during the second wave.

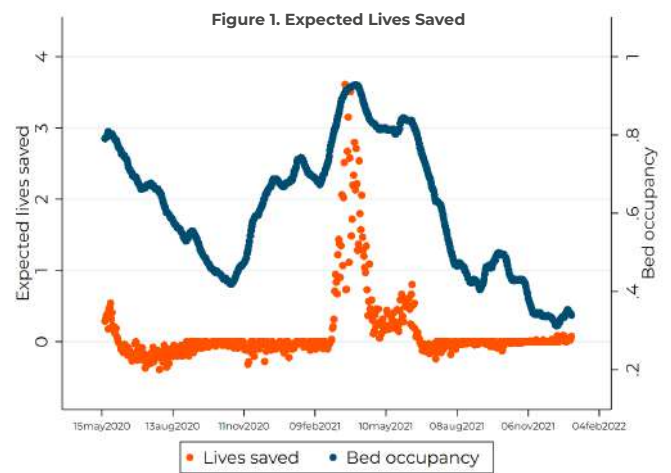
WHAT DID EINSTEIN-MANAGED PUBLIC HOSPITALS DO DIFFERENTLY?

While the publicly available data does not allow us to see the specific treatment received by each COVID patient, it does provide information for all patients regarding whether they were hospitalized in an ICU, if they received mechanical ventilation, and the length of time they spent hospitalized. The study tested for differences in these three variables to better understand the effects of treatment in Einstein-managed public hospitals.

The findings show a 20% increase in the length of hospital stays for patients in Einstein-managed public hospitals regardless of the bed occupancy rate of the healthcare system. This outcome may be attributed to superior medical practices or more efficient bed management, facilitating more extended hospitalizations, which can be particularly important for more severe cases. The results also show that patients in Einstein-managed public hospitals had a higher probability of using the ICU or mechanical ventilators.

Underscoring the importance of generating knowledge during a health crisis, Einstein also invested heavily in research during the COVID-19 pandemic. It created the Albert Einstein Intelligence Center with more than 50 scholars aiming to critically analyze preclinical and clinical studies on the disease and propose diagnostic and therapeutic advances. In 2020, 121 studies were carried out on COVID-19, some of which were used to inform treatment protocols in the United Kingdom, South Africa, and in the World Trade Organization pandemic manuals.⁸

To better understand the effects of these research efforts, a second study by IDB Invest analyzed the productivity and collaboration of Einstein's researchers. The study finds an increase in scientific production at Einstein during the pandemic, including more publications, authors, and collaborative networks, particularly in respiratory research.⁹ In terms of research quality, the results were less robust. There were positive and sustained effects on first authorship and publications in high-quality journals, demonstrating an improvement in the quality of research output. The impact on top-five journal publications and the journal's overall influence¹⁰ showed positive, but transitory effects.



CONCLUSION

The experience of Einstein-managed public hospitals in Brazil shows that preparedness counts when it comes to dealing with a health emergency and offers valuable information for enhancing healthcare delivery in times of crisis. It also demonstrates Einstein's commitment to supporting the development of the public healthcare system by sharing best practices and knowledge that enhance access and quality of care.



Additional Information

Prepared by Maria Laura Lanzolot, Karisa Ribeiro, Cristina Simon, Rodolfo Stucchi, and Norah Sullivan. Special thanks to Amanda Gomes Rabelo and Adriano Jose Pereira from Hospital Albert Einstein.

For more information, contact: rstucchi@iadb.org

This DEBrieF summarizes the findings of the study by Ramiro de Elejalde, Eugenio Giolito, and Nieves Valdés, (2024), [Impact of Private Management of Public Hospitals on Health Outcomes: Evidence from Hospital Israelita Albert Einstein during the COVID-19 Pandemic](#), which is part of IDB Invest's Development through the Private Sector Series.

Photography: Hospital Israelita Albert Einstein

The views expressed here are those of the authors and do not necessarily reflect the views of the IDB Group, its respective Boards of Directors, or the countries they represent.

7. Secretaria de Estado da Saúde (Censo COVID-19); available since May 19, 2020.

8. [Hospital Albert Einstein Audited Financial Statement 2020](#).

9. Using Scopus citation data and Scimago Journal Ranking indicators from 2015 to 2022.

10. As measured by the average journal's H-index, a metric for evaluating the cumulative impact of an author's scholarly output and performance.