RESEARCH INSIGHTS

Did Demand for Telemedicine Grow During the COVID-19 Pandemic?

- We exploit mobility restrictions imposed during the COVID-19 pandemic to show the existence of a larger potential demand for telemedicine services in a middle-income developing country.
- We find an increase in the number of calls by 230 percent during the pandemic. The effects were mostly driven by older individuals with pre-existing conditions who used the service for internal medicine consultations.
- After the mobility restrictions were lifted, the demand for telemedicine services remained high.

CONTEXT

In Argentina, before the COVID-19 pandemic, telemedicine had been long considered a tool to address overcrowding and limited access to healthcare while reducing cost and travel time for patients. Nevertheless, uptake of this service had fallen short potentially due to general mistrust and lack of information alongside behavioral barriers and biases. The health crisis, however, created the need for ways to provide essential services while respecting social distancing measures. In that context, the perceived additional benefit from digital solutions reduced behavioral barriers and allowed a broad set of patients to experience telemedicine services for the first time.

PROJECT

At the onset of the COVID-19 pandemic, governments around the world enacted policies to contain the disease's spread and minimize its socioeconomic impact. In Argentina, this was reflected by a sharp decrease in mobility around mid-March of 2020. Using administrative records provided by one of the country's largest telemedicine providers, we constructed a panel data set with the records for calls received during the years 2019 and 2020. We then used these data to estimate the effects of social distancing associated with the pandemic on the demand for telemedicine and the evolution of telemedicine demand once mobility restrictions were lifted.

Key Concept

EVENT STUDY

Methodology designed to investigate the effect of an event on a specific dependent variable, exploiting time-series variation around a salient event.

Key Concept

EXPERIENCE GOODS

Goods that can only be accurately evaluated and compared to their substitutes after the product has been purchased and experienced.

RESULTS

Figure 1 shows the main results. By mid-March of 2020, when mandated social distancing took effect and mobility in Argentina dropped drastically, the daily number of telemedicine calls and first-time telemedicine callers rose substantially. During the first weeks of the pandemic crisis, there was an upward trend in telemedicine use that reached a maximum around the 16th week of 2020. As mobility slowly started to return to pre-lockdown levels there was a mild decrease in demand, which nonetheless remained persistently higher than before the pandemic. These results point to an increasing demand for telemedicine that persisted even after mobility began to slowly return to pre-pandemic levels.

Within these larger trends, the following findings are particularly notable:

1. The increase in calls and first-time callers in the months after the pandemic was 230 and 198 percent, respectively.

2. The number of first-time callers as a share of the total dropped from 60% at the onset of the pandemic to 30% later on, a finding that is consistent with telemedicine being an experience good.

3. The largest effect was observed in calls resulting in prescriptions; these calls increased by 332%. Calls that resulted in resolved consultations grew by 235%; calls that led to referrals to other specialists grew by 190%.

4. The effects were driven mostly by older individuals with preexisting conditions who used telemedicine for internal medicine consultations.

Key Concept

TELEMEDICINE/ TELEHEALTH

The provision of health care services remotely, by means of a variety of telecommunication tools including telephones, smartphones, and mobile devices, with or without a video connection.

POLICY IMPLICATIONS

The COVID-19 pandemic underscored the need to adopt innovative solutions that can provide relief to strained healthcare systems. This paper indicates that there was a hidden untapped demand for telemedicine, and that policymakers have space to foster and accelerate the adoption of technological solutions to make health care delivery available to more people. Behavioral tools could help lower barriers to telemedicine, nudge people into using it, and lead a wider array of people to reap its benefits. Providing patients the ability to experience the service could go a long way toward ensuring wider, sustained use to meet growing needs.

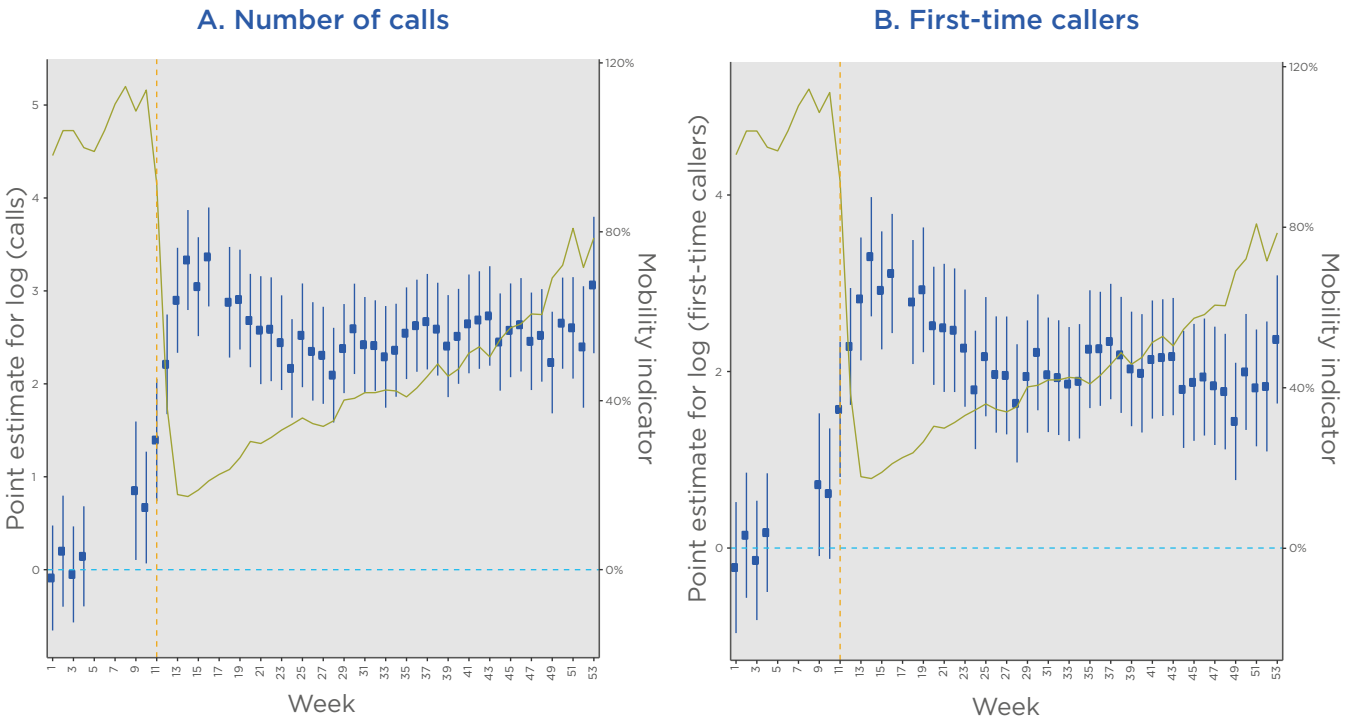
The increase in the number of patients using telemedicine in recent years provides an opportunity for researchers and policymakers to better understand the costs and benefits of the service when provided at scale—which have been widely hypothesized but very rarely measured. As more people rely on telemedicine as part of their healthcare, its impact on health outcomes will be more easily assessed. This question is part of the broader discussion of disruptive innovation in the health care sector.

A significant challenge for governments in the coming years will be to develop a legal and regulatory framework for new modes of service provision. For telemedicine to become a mainstream method for delivery of healthcare services, governments around the world would need to address pivotal concerns such as inter-jurisdictional service delivery, payments, insurance contracts, and equality in access to high-quality service.

IDB RESEARCH ON TELEMEDICINE

This paper is part of a series of IDB studies and efforts to understand health systems and their response capabilities before, during, and after the current pandemic. The IDB Behavioral Economics Group has also studied ways to promote the use of telemedicine. The study first sought to analyze the effectiveness of different communication methods to promote registration with mobile applications that ease the use of telemedicine.

Figure 1. Use of Telemedicine (event-study)



Note: The green line shows the simple average of walking, driving, and public transit mobility indicators shown in Figure 1. Blue dots correspond to the point estimates obtained using an event-study methodology that compares outcomes in 2020 with those observed in the same period of 2019, and blue bars show the associated 95 percent confidence intervals. The vertical dashed line marks week 11, when mobility restrictions were first imposed. Weeks 6–8 are missing because telemedicine calls were not recorded those weeks in 2019. Week 17 is missing because telemedicine calls were not recorded that week in 2020.

FULL STUDY

Busso, Matías, María P. González, and Carlos Scartascini. 2021. "On the Demand for Telemedicine: Evidence from the Covid-19 Pandemic."

This study also appeared in *Health Economics*.

DEPARTMENT OF RESEARCH AND CHIEF ECONOMIST

The Department of Research and Chief Economist generates new ideas to enrich the knowledge base that supports the policy agenda of the Inter-American Development Bank (IDB) and its member countries for achieving sustainable and equitable development in the region. To maximize the impact of its research, the Research Department carries out activities that serve as inputs to other IDB departments, governments, the academic community and public opinion in the region.