



Brazil Institute | July 2020

WEBINAR

The Digital Transformation of Healthcare in Brazil

On July 15, the Brazil Institute and the Institute of Supplemental Health Studies (IESS), with the support of the AWS Institute and UnitedHealth Group, convened a discussion on the future of healthcare in Brazil. Even before COVID-19, the health sector in Brazil was undergoing a digital transformation. Now, the pandemic is accelerating the use of new technologies, including telemedicine, artificial intelligence, and big data analysis. How can we leverage these technologies to expand patients' access to care and drive better results? To watch the webcast (in Portuguese), [click here](#).

Ricardo Zúñiga, Interim Director of the Brazil Institute, and José Cechin, Executive Superintendent of the Institute of Supplemental Health Studies (IESS) opened the event on behalf of the hosting organizations.

As Zúñiga and Cechin noted, the health sector in Brazil faces the immediate challenge of responding to the COVID-19 crisis, as well as the longer-term challenge of leveraging technology to improve the quality of and access to care. This effort will require dialogue and cooperation between the public and private health systems. Yet

as Cechin pointed out, digital health also opens up new space for innovation and creative solutions to Brazil's health challenges.

Congresswoman Adriana Ventura, Federal Deputy (SP – NOVO), noted that conversations about creating a digital health system in Brazil first began in 2002, and the use of telemedicine long pre-dates COVID-19. A handful of states have taken the lead, including Santa Catarina, which since 2007 has offered telemedicine to all of its residents, but also Rio Grande do Sul, São Paulo, and others. The federal Ministry of Health launched its own telehealth program (TeleSUS) in 2016, focused on primary care, as a core component of its digital health strategy—with the potential to reduce wait times for patients and avoid unnecessary travel.

However, Ventura also highlighted that, before the COVID-19 pandemic, Brazil had struggled to create a modern regulatory framework for the practice of telemedicine. In 2019, the Brazilian Federal Council of Medicine (CFM) issued Resolution CFM No. 2227/2018, which established rules and different categories for telemedicine, only to repeal the controversial regulation a few weeks later after pressure from the medical community and demands for an open debate of the new regulations. The CFM resolution currently in force dates back to 2002, and a revised resolution is still being drafted.

Ventura said that COVID-19 added urgency to the question of telemedicine, which is why she and several other members of the Brazilian National Congress wrote a law authorizing the use of telemedicine during the pandemic (Lei nº 13.989). She argued that stay-at-home guidelines have also pushed many Brazilians, including medical providers and members of Congress, to try telemedicine—often for the first time. From April through June 21, TeleSUS served 73 million patients: 25 million cases were concluded (no further care provided), just 1.8 million required a referral outside of the TeleSUS system. There has also been greater collaboration between the public and private health systems.

Ventura expressed hoped that greater familiarity with health technology could, in turn, help break down resistance to the broader use of telemedicine after the pandemic. She noted that already among her colleagues in the Chamber of Deputies there is support for telemedicine, and widespread recognition that telemedicine is here to stay.

Yet Ventura also highlighted a recent survey by the Paulista Association of Medicine that shows how much room there still is for improving the quality of telemedicine through training and supporting healthcare providers. The study, which interviewed 2,300 doctors, found that 51 percent had offered remote care during the pandemic. However, the vast majority—90 percent—received no training in the use of telemedicine.

There is an expectation, according to Ventura, that the Brazilian government will be able to use the knowledge gained during the pandemic to build a permanent and appropriate legislative framework for telehealth, as part of a stronger health system that “gives access to those who need it most.” Ventura noted that there are already two hearing requests before the lower house of Congress to debate some of the more controversial aspects of

telehealth, such as remuneration and rules for teleconsultations; as well as several draft bills under discussion, covering questions such as prescriptions, digital queues for SUS services, and online vaccination certificates.

Ventura stressed that there is much yet to be discussed and resolved when it comes to telemedicine policy in Brazil. However, “There is no turning back...and Congress has to play an active role in building this [digital health system] with society.” The main issue, as Ventura sees it, that Brazil does not yet provide its entire population with adequate access to quality healthcare—and digital health should be a part of the solution.

Jacson Venâncio de Barros, Director of the Department of Information for Brazil’s Unified Health System (DATASUS) at the Ministry of Health, underscored the many benefits of using telemedicine and other health technologies, especially for patients. He noted that Brazil’s Unified Health System (SUS) includes not only public sector hospitals but also private sector hospitals—it encompasses the entire Brazilian healthcare system. As a result, DATASUS thinks about solutions for the health ecosystem as a whole, and views the various technologies encompassed within telehealth as tools to improve patients’ wellbeing and provide better service.

Barros said that DATASUS is working to expand access to health information across the public and private networks. The problem has never been a question of technology, but there are significant infrastructure challenges. DATASUS is starting a new project to bring internet to 16,000 primary health units over the next 90 days. But even once there is connectivity, they will still need to install equipment and data systems, and then train personnel to use the new system.

Another challenge is that, at the moment, health data is compartmentalized. Barros explained that if a patient visits a primary health clinic and is then referred to a specialist—whether through telehealth or face-to-face—their data does not transfer. Overcoming this barrier would have substantial positive implications for the quality and continuity of care that patients receive. Barros noted that the existence of better health data transfer pathways would, over time, create a culture of data sharing.

There are also efforts underway to create a national health data network. COVID-19 has accelerated this effort, and Barros noted that the national health data network is already connected and in use for COVID-19 lab results, using blockchain to provide a layer of data privacy. However, much more could be done even just with COVID-19 patients: data on a patient’s length of stay in an ICU, whether they required a ventilator, or whether they had preexisting conditions. For another program designed to incentivize data collection and reporting, the Ministry of Health is providing financial assistance to municipalities that manage to send data to the national network. The funds allow municipalities to update health information systems and other citizen services.

In all of these efforts, data privacy is an important consideration. Barros stressed that patients own their data. Only the patient and the individuals they approve have access to the patient's data. Patients have the right to request that their information not be shared with other providers—they can stop the primary health clinic, for example, from sharing health records with a specialist.

Marcelo D'Agostino, Senior Advisor, Information Systems and Digital Health at the Pan-American Health Organization (PAHO/WHO), noted that Brazil has a global reputation in telehealth, but that the broader digital transformation of healthcare in Brazil has moved slowly: “we have been talking about technology for 30 years.” He argued that technology, such as artificial intelligence, goes through policy cycles, receiving higher and lower degrees of interest—but that policymakers now need to commit to digital health in a permanent way.

Part of this commitment involves addressing the persistent digital divide in Latin America. Many in the region lack internet connectivity. Most have cell phones, but there is a significant gap between the capabilities of basic cell phones and smart phones—and this has implications for the deployment of telemedicine and other digital health initiatives. He noted that telemedicine has enormous potential, especially in the current moment as people across Latin America stay at home—but it is important that people not only stay at home, but “stay connected” at home. That would create significant opportunity for the health sector, to the benefit of the population.

However, D'Agostino argued that the health sector has not yet taken a central role in governments' digital transformation initiatives, although this is beginning to change. In October 2019, all of the ministers of health of the Americas endorsed a regional plan of action to strengthen information systems and digital health—a significant positive step. Ensuring the proper handling and protection of data is key to success.

D'Agostino also stressed the need for a holistic, multi-sectoral approach to digital health systems. This requires bringing non-traditional partners to the table and learning from regional and global experiences. He raised the European example of personalized medicine, which uses disaggregated data to reach populations in vulnerable situations. Better information technology and digital health are critical to the future of healthcare in Latin America, but D'Agostino stated that countries need to be moving forward in a way that focuses on reducing inequalities and improving access to care.

Jac Fressatto, Inventor of Robô Laura, and Founder and President of the Laura Fressatto Institute, underscored that people need access to technology to improve their lives and their health. As a result, technology needs to be accessibly priced and efficient. Cheap technology is of little use if it is not efficient, but expensive technology is unlikely to be used at all. Given the context of the Brazilian health system, technologies also need to work with all levels of healthcare in Brazil, across the public and private sectors.

Fressatto noted that much of the technology needed to improve the healthcare system already exists, but we are often unaware of just how much technology is used in our daily lives. Indeed, the robot Laura was based on technology that already existed. However, there has been a seismic shift in the last ten years in terms of the volume of data being collected and stored. This makes AI much more powerful, and makes it easier to work with and share data.

Traditionally, data processing and configuration has relied on human analysts, which is perhaps the biggest challenge to the use of information. Fressatto stressed that data processing is not magic—it takes expertise and it takes time, as well as adherence to different protocols, norms, and guidelines to ensure data privacy. Artificial intelligence (AI) not only speeds up information analysis process but also ensures greater data privacy because it produces easily-anonymized big data, rather than disaggregated, personalized data. Fressatto pointed out that public health researchers do not need to know a patient's name, address, or any other identifying details; they instead need to know clinical results and other health indicators with relatively large sample sizes. The challenge is two-fold: ensuring that the information is both secure and public. Fressatto argued that this requires there to be no private economic gain derived from the data being produced.

In closing, Fressatto stressed that Brazil's decades-long history of health information management and patient care through SUS provides a solid foundation for future advances. Technology should always be in development, evolving and incorporating what is new.

Several key themes emerged from the discussion:

COVID-19 has created a unique window of opportunity to accelerate and deepen the digitalization of healthcare in Brazil. This is particularly apparent with telehealth and telemedicine. As Congresswoman Adriana Ventura noted, many Brazilians are using telehealth services for the first time during the pandemic, including remote consultations. This growing familiarity, and the fact the telehealth services are proving effective at responding to patient needs, is creating broad support for the continuation of telehealth services going forward.

Yet technology also needs to be affordable, efficient, and widespread. Digital health works best if all parts of the healthcare system are able to connect and engage. At the provider level, this means ensuring that healthcare facilities have adequate equipment and access to

the internet; and that staff receive training in using that equipment. At the patient level, this requires considering the patient's means of access: are they using a laptop or a smartphone, or a more limiting basic cell phone?


The issue of connectivity is also critical for data. Health data is compartmentalized in Brazil, and hard to transfer from one provider to the next or between providers and the national health system. At the patient level, this makes it harder for patients to take their data with them if they move to a new provider or see a new specialist. At the systems level, these silos make it harder to analyze and process data in useful ways. The Ministry of Health is taking action in this space, but health startups are also playing a significant role in driving innovation.

Lastly, it is critical to keep in mind that technology is not, in and of itself, a solution to healthcare challenges. Rather, technology is a tool that can be leveraged to increase access to care, improve outcomes, drive efficiency, and mitigate socio-economic determinants of health. Technology expands the potential of healthcare; ongoing innovation and evidence-based, multisectoral policy discussions will be required to achieve that promise.

To watch the webcast (in Portuguese), click here.



One Woodrow Wilson Plaza
1300 Pennsylvania Avenue, N.W.
Washington, DC 20004-3027

 www.wilsoncenter.org/program/brazil-institute

 brazil@wilsoncenter.org

 facebook.com/brazilinstitute

 [@brazilinst](https://twitter.com/brazilinst)

 202.691.4147