

Spain makes digital health a strategic priority

Spain's director-general of digital health and information systems shares what is behind national healthcare service improvements as Europe moves towards greater cooperation.

When it comes to digitalization in Europe, few countries have made more progress than Spain in recent years. Between 2016 and 2022, the country jumped eight positions from 15th to seventh place in the [European Commission's Digital Economy and Society Index](#), more than any other member state.

In terms of connectivity, Spain is second only to Denmark and the Netherlands, with more than 90 per cent of households having access to a very high capacity fixed network (VHCN). But it's not only the hardware – Spain also has an above-average level of human capital development, with only the Nordic countries and the Netherlands ahead in the digital skills ranking.

"We are fortunate to have a number of great professionals, who are very dedicated, to lead the digital transformation," says Noemí Cívicos Villa, director-general of digital health and information systems in the National Health System.

There is more to be done in digital government, even though Spain ranks 10 percentage points above the European average and ahead of the region's economic heavyweights Germany, France, and Italy.

An example of how digitalization has advanced is in the public health sector. Here, digitally-transmitted prescriptions have replaced rubber-stamped hard

copies and patient health data is stored in electronic records rather than physical filing cabinets.

The process began well over a decade ago with a legislative framework that regional government organizations then bought into. But it was only between 2019 and 2020 that both the patient data and e-prescription systems got up and running nationwide. The government also created the general secretariat that Cívicos leads in order to deal exclusively with the challenge of digital transformation. In November 2021, it presented a five-year plan called [Digital Health Strategy](#). This aims to build out digital health services in the context of public health, foster the integration of health data, and develop analytical tools to improve the public health administration.

Patient care, anywhere

The federal government established interoperability between existing databases in Spain's autonomous regions. As a result, wherever patients need medical help, public health officials with National Health System authorization can obtain their record and view patients' prior conditions. At the least, this is more convenient and effective, but it can even be life-saving in emergencies.

The last autonomous region joined the system in 2020. But even before then, Spain ranked among the top five

countries where “digital technologies are already commonplace in practices and clinics,” according to a study titled [#SmartHealthSystems](#), published by the Bertelsmann Foundation in 2019

Goodbye, paper

One such technology is the e-prescription. The physician’s recommended medical treatment is stored online and linked to a patient’s health insurance card. The patient then presents this card to the pharmacist. As a security precaution, the patient is asked where the card was issued. In case of technical issues, there’s a helpline that the pharmacist can contact to get the names of prescribed drugs manually.

Even before the COVID-19 pandemic, the regular public health survey [Barómetro Sanitario](#) showed approval ratings for digital services such as e-prescriptions (88 percent), online scheduling of doctors’ visits (84 percent), phone consultations (81 percent), and electronic records (79 percent). In the [same survey in 2022](#), 94 percent of those questioned agreed that health professionals should be able to share data from the electronic records.

Efficiency savings

The e-prescription has prompted doctor visits to fall by as much as 20 percent, as patients can get renewals online. Meanwhile the analytics derived from near real-time data flows and nationwide aggregate sales support improved procurement, logistics, and the stocking of medicines. “You can adapt purchasing policies of the National Health System. You can fine-tune them and also save money. In addition, you can project years ahead,” says Cívicos.

The privacy question

Patients, doctors, and healthcare managers want to be reassured that personal health records are secure.

Cívicos highlights three facts that address this concern: Spanish legislation and controls govern the programs; they comply with appropriate standards; and they are continually reviewed for best practice.

Detailed laws establish who has access to what data. Only certain health officials in the national or regional administrations have primary access. Secondary users, such as analysts or academics, can only access aggregate and anonymous data, for example.

In addition to periodic reviews on national security compliance, every year the health ministry’s digital services are audited to validate its ISO 27000 certificate on international standards regarding security, privacy and IT issues.

“This is to show that we, as a ministry, have implemented the appropriate security measures for our services,” says Cívicos.

In addition, anybody accessing medical records requires a digital certificate, be it the patient or the healthcare professional. That means one can trace who consults the records, and at what times. That makes it safer than the paper-based system of folders, which could be examined without leaving any traces. Additionally, patients can choose what to share in their file.

The path ahead

Healthcare providers give the e-prescription and digital medical records the highest marks (7.9 and 6.9 out of 10 points, respectively). At the same time, more than half of the Spanish population sees telemedicine as an option they’re willing to use, according to [Barómetro Sanitario](#).

“Do we still have a long way to go? Yes!” says Cívicos. At the top of her wish-list

are more resources and training, which includes internal talent discovery and promotion. She also selects continued top-level support from politicians as critical to maintaining momentum.

Digital era mindset

What does Spain's experience offer countries that want to accelerate the digitalization of their public services? Cíicos says that awareness and conviction of the benefits of digitalization, and a new mindset are important.

"Public and private organizations have been very aware of the need to declare digitalization a strategic objective from the very top of management. They have seen the benefits of the analytical intelligence it generates for decision-making or its potential in creating wealth and well-being," she explains. This implies much more than replacing filing cabinets with databases. "You can't adapt procedures to the digital world. You have to rethink them."

Share the lessons

In Europe, some 50 million people face chronic diseases, the population is ageing and life expectancy is 81 years and rising. At the same time, people are more

mobile, travel more internationally, and want more choices to access healthcare. All that poses new challenges that require cutting-edge digital technologies, says Cíicos.

In practice, that means massive digitalization of primary healthcare; the use of big data and analysis to spot trends and plan better; and the employment of artificial intelligence in diagnosis, treatment, and prevention.

It means the creation of complete digital hospitals, clinics, and practices, as well as an overhaul of the digital patient file that will include digitalised diagnostics that will become the centrepiece of the new Digital Health Services.

This would then be coordinated with other [European Union member states](#) for patients and doctors to use e-prescriptions and health records across borders, moving towards a [European health data space](#). Having worked on sharing data between 19 autonomous regions in Spain, the general secretariat which Cíicos heads is excited to be representing the country in the efforts to make it happen among 27 EU member states.

Find more ideas and examples of public sector digital transformation at the [AWS Institute](#).