Region of Madrid:
Leveraging Electronic Health Records for Better Healthcare, Happier Citizens

"In less than a year, HORUS has reached 26,000 active users and more than 1,750,000 medical records have been accessed."—Zaida Sampedro Préstamo, Directora General de Sistemas de Información Sanitaria, Servicio Madrileño de Salud

"Nowadays, more than 100 doctors have been integrated into HORUS evolution work groups. So they feel HORUS is their own system."—Zaida Sampedro Préstamo, Directora General de Sistemas de Información Sanitaria, Servicio Madrileño de Salud

Client Background

Madrid is the third largest city in the European Union after London and Berlin, and its metropolitan area is the third largest in the European Union after London and Paris (over six hundred square kilometers). The Madrid Health Service (Servicio Madrileño de Salud—SERMAS) has a network of integrated and organized care services including more than 400 primary care centers, 35 hospitals and over 80,000 professionals across both primary and specialized care.

Business challenge

In 2010, the Region of Madrid passed a new law enabling citizens to choose which healthcare professional they would like to attend to their conditions. While inhabitants may have been happy with the new regulation, it created significant administrative challenges. In the past, each patient’s health records were kept by their own health professional. The new law allowing citizens to move between healthcare professionals, and even hospitals, meant that duplicate records were created for many patients. In addition, time, energy and money were being spent on unnecessary, duplicated diagnostic tests, slowing the delivery of services. The Horus project was created to address these clinical and administrative challenges.

How Accenture helped

Accenture had an excellent relationship with SERMAS dating back to 2002. Its knowledge of SERMAS systems, processes and culture was a key factor in the Region’s decision to appoint Accenture to Horus—an extension of the standing relationship.

Primary responsibility for the Horus project management office lies with Accenture, whose services to SERMAS include an end user support centre for all office IT requirements. Once it had consulted with Accenture about the most appropriate IT components for Horus, SERMAS also entrusted Accenture with the responsibility for development of the solution itself.

The Madrid Electronic Health Record (Horus) system is, effectively, a viewer which aggregates data for a single patient from all parts of the Madrid healthcare system. Using Horus, professionals can instantly view a consolidated set of records for a given patient. This includes demographic information, contact information, referral documents, detailed reports and images for investigations and procedures, clinical information from primary care systems, vaccinations, medication, antecedents, allergies, temporary incapacities, episodes, clinical orders, nursery care.

The solution serves the entire SERMAS network of clinicians, hospitals, and care centres. It was designed and built in around 12 months, and went live in December 2010. Patient information remains distributed in local databases across the region, but Horus uses a unique identifier allocated to each patient to draw the latest records from each database in real time. This distributed solution was chosen because:
The systems involved are extremely critical and it was not desirable to disrupt services in any way.

The city incorporates more than six million people, and a database with each citizen’s complete medical history would have to be enormous.

The entire database would have to be refreshed daily, and the synchronization of updates from all sources would be extremely complex.

The solution does not require a huge database, and avoids the development of several complicated synchronisation processes. Accenture leveraged its experience to fast track the project as much as possible, and to ensure that the solution (built on Microsoft.NET technology) solution brought about operational benefits as soon as possible.

Accenture research has yielded clear evidence of the benefits of integrated healthcare and the system-wide exchange of data. It shows that connected health facilitates better care coordination, improved disease management, fewer clinical errors, and new opportunities to save administrative and clinical costs. A connected health approach offers three levels of value creation:

- Clinical efficacy—Including reducing administrative activities and costs, eliminating duplicate lab and radiology tests; improving patient safety through

- 24/7 access to comprehensive, legible medical records; and speeding up access to patient medical histories and vital information.

- Shared knowledge—Including reducing medical errors and improving care quality, benefitting in drug interaction alerts, sophisticated tools to enhance clinical decision-making through evidence-based care protocols, and innovations and new capabilities in population care.

- Care transformation—Including advanced analytics to inform clinical decision making, population health management and new care delivery models.

Horus is already delivering significant benefits in terms of clinical efficiency.

High performance delivered

The first benefit of the Horus project is the availability of patient information to healthcare professionals no matter where they are in the SERMAS network—at any facility, in any department. Before Horus, clinicians and administrative staff wanting to access patient records from a primary healthcare facility, or a different hospital, were sometimes unable to gain any access to this information at all. At other times, if the patient was able to help, this information could be accessed via paper-based records. Now, the professional can view all records pertaining to a patient in just seconds.

Other benefits and progress:

- Some 30 million documents are available via Horus.

- From January to September 2011, the monthly total number of documents accessed rose from under 5,000 to over 40,000.

- Over 26,000 healthcare professionals are actively using Horus (on a monthly basis at least).

The adoption of the Horus system, as well as its effect on the efficiency of the Madrid region’s public health system, have been remarkable. While some users were apprehensive about using the technology at first, Accenture delivered several workshops to encourage clinicians and other stakeholders, and help them understand the benefits of Horus. As a result, Madrid healthcare professionals have voted with their feet, and clearly find the system increasingly useful and valuable.


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