

# Case Study

## Development of Health Care Records in the Balearics

»Doctors now have access to all patient information through our integrated health care records system. A complete picture of the patient enables health care staff to make better clinical decisions, which results in improved care and optimum health care results in the long term.«

Luis Fernando Manzanero, Deputy Director of Technology at IB-Salut



### The Client

The Balearic Islands are an archipelago of four islands (Majorca, Menorca, Ibiza and Formentera) situated to the east of the Spanish mainland. They have a resident population of 1.2 million, 40% of whom live in Palma de Mallorca, and receive 10 million visitors each year – tourism being one of the cornerstones of their economy. Since 2002, the regional government has been responsible for offering health care services through IB-Salut (The Balearic Islands Ministry of Health and Consumer Protection). The health sector in the region employs more than 12,000 people, including 2,388 clinicians and 2,500 health workers.

### The Challenge

There are 1.2 million residents in the Balearic Islands, split between eight municipalities, with almost 40% of the population concentrated in the capital, Palma de Mallorca. This makes it difficult to offer public services, such as health care, in a consistent way. This challenge is exacerbated by the fact that the health system in the Balearic Islands is fragmented across several organizations, which include primary care, ambulances, hospitals and long-term health care facilities.

In the past, medical information was stored in the information systems at local hospitals and electronic medical files. In some cases, health care centers worked exclusively on paper. The aforementioned fragmentation increased the risk of errors being committed and made it difficult to search for information sources.

To improve patient care and safety, IB-Salut wanted to make complete medical information concerning patients easily available to any professional in the region. In 2005, therefore, the ministry embarked on a long-term program to modernize its health care IT systems. The idea was to implement a modern and reliable health care information system, which could integrate health care information across the regional health care network. In the future, this system will include publicly financed private organizations.

### The customer

Country: Spain  
Industry: Public health care  
Employees: 12,000  
Website: [www.ibsalut.es](http://www.ibsalut.es)



### The challenge

- Improve patient care and safety.
- Make vital patient medical information more accessible and available to any health worker in any location.

### The solution

Definition and implementation of the "health sheet" or summarized clinical history, as well as the possibility of an interconsultation.

- Web-based clinical portal that gives access to an electronic medical file containing data for clinics and hospitals in the region.
- Integration bus; facilitates adoption of HL7 standards.
- Specialized data repository integrating data from different applications to provide complete patient records.

### Customer benefits

- Clinicians have up-to-date patient information.
- The clinical portal enables health care providers without their own EHR (Electronic Health Record) solution to access EHR.
- Reduces the time taken to complete routine procedures, such as patient research.
- Improves patient care by preventing adverse events and reducing the possibility of diagnostic errors.
- Reduces costs by preventing repeat tests.
- Improves coordination between providers to improve work flow efficiency.
- Reduces iatrogenic accidents.

### Products and services

- Clusters Two Linux RedHat. BL20p Blade with 2 Xeon® CPUs. 4GB RAM
- Orion Health Rhapsody® Integration Engine
- Orion Health Concerto® Portal
- Oracle HTB – Clinical Data Repository
- Oracle OIM – Corporate Identity
- IBit EMPI – Patient Index
- Ibsalut FIC – Business Intelligence Repository

### The Solution

A crucial part of the proposed solution, which serves more than 5,000 registered users, is access to integrated health care information, such as, for example, treatment records for each patient, as well as the creation of an infrastructure that makes the information available to all clinical professionals in the region. IB-Salut decided to implement an EHR system using a web-based clinical portal. This portal enables the government of the Balearic Islands to offer access to information from a wide range of applications, including existing systems and the best systems on the market, thereby eliminating the need to implement a global system and avoiding the need to commit to a single provider.

*“Previously, medical records were spread across several practices, hospitals and clinics, and doctors shared some, but not all, patient information. Crucial data was actually missing, which presented a series of challenges.”*

Between 2006 and 2007, the data from the different central repositories for clinical information was loaded into a clinical data repository, and the portal was integrated into the HIS (Health care Information Systems) for each hospital in the region. The portal offers doctors a holistic view of a patient’s clinical information, as part of a search-based solution that is easy to navigate. A summary of the patient’s information is provided in a “dynamic patient summary” combining data from the underlying integrated systems. Detailed clinical information and documents within the record are accessed through a tree view of the patient’s documents.

In 2008, the aim was to extend the clinical information available, loading data from the different laboratories in hospitals belonging to the IB-Salut Central Corporate Repository, as well as to standardize the local laboratory catalogues using the LOINC standard. The user is able to access this combined and coherent laboratory data through the clinical

data viewer and portal. In addition, corporate files, such as “Acute Coronary Syndrome”, have been developed. These are available through the dynamic patient summary in the portal.

### Benefits for Regional Clinics, Patients and Health care Organizations

Implementing an electronic health care record has been beneficial for regional clinics, patients and health care organizations.

- Clinicians at any clinic, rehabilitation facility, or health care organization in the region have an up-to-date view of a patient’s medical record.
- Patients benefit from improved care, since a complete health care record ensures that the correct medication is given. In addition, the health care record reduces the possibility of diagnostic errors, as the doctor can quickly review shared information.
- The regional health care organization significantly reduces its costs as repeated laboratory and radiology tests become unnecessary, and work flows are more efficient thanks to improved coordination between health care professionals.

### In Summary

To improve patient care and safety, IB-Salut chose an EHR solution – a portal-based Electronic Health Record – to give all health care professionals easy access to medical files at any point during patient treatment. They chose a solution based on an older health care IT architecture, comprising Orion Health™, Oracle and Fujitsu products and services.

### About Fujitsu

Fujitsu offers a series of services and solutions specifically designed for public health care, based on over 30 years’ experience working with the public sector in Spain. Our commitment to long-term work ensures we meet our main goal: improving the quality of public health care.

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