

EPR: TECHNOLOGY TO SUPPORT HEALTHCARE

In the healthcare sector, one of the main obstacles to the spread of *Electronic Patient Record* (EPR) tools is the impact that their integration with pre-existing systems may cause, even on the business organization. In this regard, the experience showed the limits of native integrated solutions, whose integration within the Hospital Information Systems (HIS) is very invasive.

The challenge consists in the development of an EPR as a flexible, intuitive and immediate tool, supporting the healthcare personnel activities during the diagnostic and treatment process, whose integration may have a limited impact on the HIS (Hospital Information System), thus on the Healthcare Organization.

The EPR proposed by Santer Reply is the core component of the Integration Platform, a light tool allowing different users to consult the complete patients' medical history with no fragmentations or interruptions, according to pre-defined information access and visibility rules, configurable on the bases of the business policies.

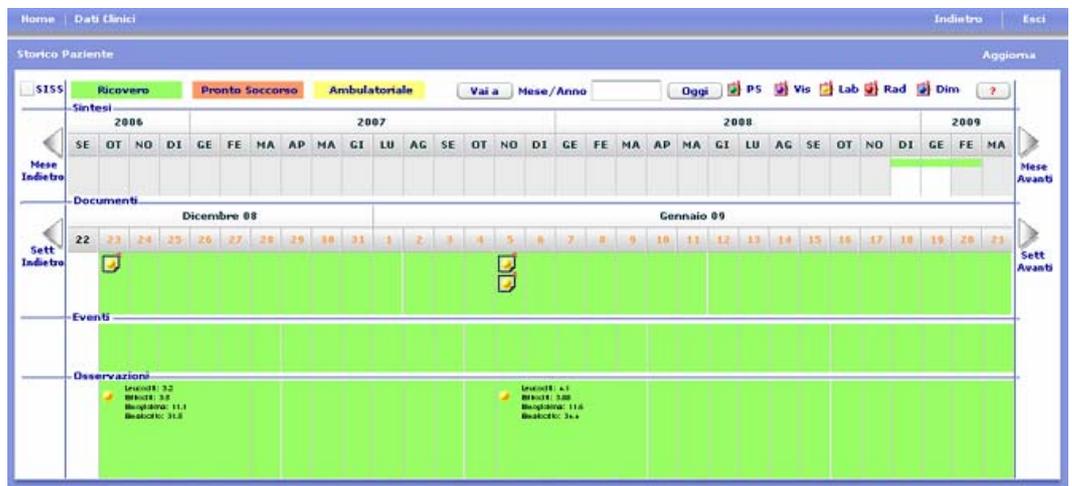
THE SCENARIO

The information systems of the healthcare facilities are extremely heterogeneous and complex, having peculiar features different from one organization to the other: IT coverage is often partial and applications are not integrated within one another.

The clinical information saved in separate files lead to data duplication and inconsistency, thus making consultation by healthcare personnel difficult.

THE SOLUTION

The EPR developed by Santer Reply is the core component of the Integration Platform. The adoption of technology standards inspired to the SOA architecture principles, together with guidelines and the application standards (IHE, HL7), allows to integrate both administrative as well as clinical processes though keeping the existing applications.



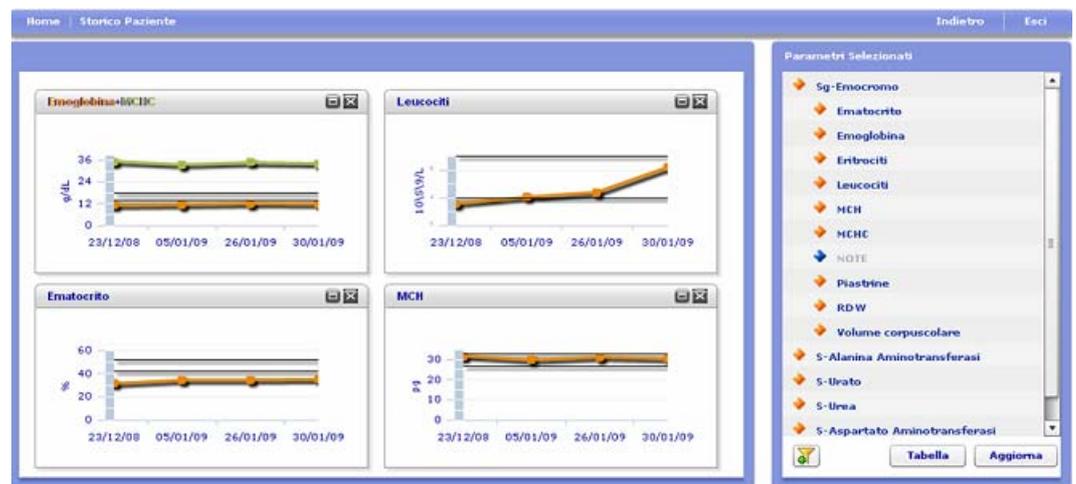
The EPR solution constitutes a light tool enabling different users to consult the complete patients' medical history with no fragmentations or interruptions, according to pre-defined information access and visibility rules, configurable on the bases of the business policies.

THE SYSTEM

A light solution, which does not require client installation (just the Flash Player plugin), EPR is “fed” by the department applications through standard HL7 messages, according to IHE profiles.

As the core element of the integration platform, EPR is the tool to share episodes, events, observations and documents in text format (pdf) as well as in structured format (HL7/CDA2), aggregated per episode or problem, in such a way as to enable to constantly follow the whole diagnostic and treatment process:

- List of patients being treated
- Viewing of medical episodes over the years
- Clinical value progress over the time
- Temporal correlation of clinical values



The web-based users interface, developed on the basis of the Rich Internet Application (RIA) concept, may be accessed through common browsers, with immediate user interaction.

THE TECHNOLOGIES

- Adobe Flex, RIA development framework
- Hibernate, middleware open source platform, providing an Object-Relational Mapping (ORM) service, makes the application fully independent from the database used
- Oracle DB 10g
- Apache Tomcat 5.5

THE RESULT

ERP may be integrated within any Hospital Information System without altering the balance between the pre-existing systems, with great advantages within a short span of time: by gathering the information already circulating on the integration platform, it aggregates it in order to make it available to users in a flexible way, to satisfy different needs. The result is one sole, consistent database, which may become the source for investigations and clinical, scientific, epidemiological and statistical researches, consultable also through an application having an attractive and easy-to-use interface, offering immediate access.



Santer Reply is the Reply Group company specialized in the development, implementation and management of vertical application and services for Local Health Authorities, Hospitals, Municipalities and Regions. Santer Reply aims at helping the healthcare system and public administration during the change process, thanks to its ability to plan, develop and manage web-based solutions having high innovative content.

Santer Reply offers: integration capability and project management; knowledge and skills specialized in the healthcare market, as well as in the administrative, hospital, territorial and managerial sector; delivery quality; knowledge and competence specialized in Public administration, services to citizens and service management for public consortiums; strong application focus, consistent with the infrastructures and the services offered by the Social Security Information System.