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DLA Project – Component 3 – Good Practices identification

Title	Ianus- Modelo Unificado de Historia Clínica electrónica
Acronym	**Ianus**
Web site	
Practice logo	SERGAS
Type of initiative	Please indicate the type of the GP X Project or service ☐ Capacity building ☐ IS policy / legal framework ☐ Award scheme ☐ Strategic initiative ☐ Other (*please specify*): ☐ Network _____ _____
DLA Country/Region	Please indicate your DLA region ☐ Baden-Württemberg (Germany) ☐ North Hungary ☐ Estonia ☐ North Portugal X Galicia (Spain) ☐ South West Ireland ☐ North Hungary ☐ Tuscany (Italy) ☐ Macedonia (Greece) ☐ Western Greece
City / Region	Galicia
Period of realization	Insert here the start date – end date of practice realization Start date: 2007 End date: ---
Date of activation	2010
Focus area **(see DLA manifesto)**	Please indicate an item: X e.Participation ☐ Secure digital local networks ☐ e.Inclusion x☐ Advanced municipal and local services ☐ Full broadband access
Type of service	Salud

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Topic(s) (see DLA manifesto)	Implantation of the Electronic Prescription, the e-prescription, in Galicia.

Abstract

The Electronic Medical Record eSaúde – Ianus is a programme developed by the Galician Health Service (SERGAS). This programme aims to consolidate the electronic medical records, e-prescription and citizens access to all health services.

This programme links medical records among different specialized medical units, gives a transversal coverage to the gap with primary health care systems and manage all medical documentation in both cases.

Ianus keeps the current level of investment in information systems and makes possible its interaction with the other ICT systems at regional level. Thus, this programme allows us to know all existing information about the medical history of one person with a single consultation. In addition, the programme improves the current systems with new functions and applications. IANUS is considered as a good practice and it offers great figures: 10 million medical reports, more than 13,000 users, more than 1,700 professionals connected and more than 7.5 million prescriptions.

As the backbone of the electronic medical record, IANUS interacts with other projects aimed to boost a new health care system like electronic prescription, or an important range of department information systems. All this systems will constitute the electronic medical record of each patient.

Policy context and strategic framework

The Xunta de Galicia Ministry of Health and the Galician Health service (SERGAS) have been developing, from 2006, the strategic lines and action plans which made possible the electronic distribution of medicines in all the pharmacies in Galicia. This way, the implementation of the Electronic Receipt in Galicia, the e-Receipt, has been completed.

The electronic receipts distribution project is the culmination of an innovative process of implantation of strategies that the eHealth began to develop in 1991. It is also a project in line with the action plan proposed in the "2004 European commission's comunication (COM 2004/356)". As a result of that innovation process, and in relation with the e-Receipt, we should highlight the development of the following inititatives:

• Creation of an integrated health net

Identification of the population through Health Card.

•Identification of proffessionals through Health Card with digital certificate.

• Electronic Medical History

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•System of assessment of pharmaceutical services

• Drugs and sanitary products database

•Electronic prescription

Scope	☐ City	☐ Municipality
	☐ Province/County	X Region/Nation

Target users or group	X Citizens	☐ Civil Society
	☐ Industries	☐ Other (*please specify*):
	☐ Associations	_____
	X Public Administrations	_____

Description of target or users group

The electronic prescription is the process through which a doctor, propperly identified with his individual health card (TIS) with digital certificate and duly authorised by the Galician Health System, SERGAS, can prescribe a medical treatment in just one appointment with the patient.

The electronic prescription is written directly on the patient Electronic Medical History, which establishes a "pharmaceutical credit". This credit allows the automatic emission of e-Receipts, so that they can be distributed in any Galician pharmacy. The main beneficiary of this new system is the chronically ill population, since the electronic receipt allows to automatically renew the prescriptions, so that the patient can directly buy the drug products in the pharmacy when it is required.

Another advantage of the electronic prescription is that doctors have access to information related with the medication at the very moment of the prescription, and they also count with a treatment tracking. At the same time, the drug and sanitary products database is enhanced.

Standardization

The standardization becomes an act of intern control and it does not require an additional visit of the patient. The same way the act of prescription is modified to become an act of prescription of treatments, the standardization process is also modified, in order to be a standardization of treatments instead of a standardization of receipts.

Distribution and registration

In order to have access to the electronic receipt distribution system, doctors must be duly identified with a health card which includes a digital certificate. At the same time, the patients will be identified through their individual health card (TIS) card. The system identifies the patient and shows the doctor all the information related to e-Receipts or prescriptions planned for the future.

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The inmediate incorporation of information to the patient Electronic Medical History prepares the way to a new model of registration. This new model allows the continuity of the chain among the different agents implied. Thus, it makes the communication much more agile, and it allows to authomatize the processes.

Overall implementation approach	X Public administration(s) ☐ Private sector ☐ Non profit sector	☐ Partnerships between administration and/or private sector and/or non profit sector ☐ Other (*please specify*): _____ _____

Description of the way you implement and manage your initiative/service

No apply

Technology choice	☐ Proprietary technology ☐ Open source software ☐ Mainly (or only) open standards	☐ Standard based technology X Accessibility compliant (min WAI-AA) ☐ Not applicable

Technology solution

At this stage, instead of defining the technological architecture of IANUS is better just to state its design basic principles, which are the pillars of the e-Prescription:

- Integration in other existing initiatives: Electronic Medical History, e-Prescription, TIS system for citizens and professionals, evaluation system for pharmaceutical services, data bases of drugs and health products, etc. All of them are part of the same health service.
- The architecture is a result of a continuity plan that has defined the needs of availability,

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redundancy and recovery if there is a failure, as well as some mechanism of contingency.

- Volumetric and functional scalability, that allows a total coverage of the territory for the e-Prescription, as well as a wider functional spectrum.
- Real time operative: solutions should always take into account the needs of real time solutions present in the normal functioning of pharmacy services.
- To guarantee control of the dispensation processes and the proper governance of all initiatives related to development of e-Prescription.

The technologic architecture is based in the direct integration between the core elements of the e-Prescription within SERGAS (Galician Health System) infrastructure and a specific tool for e-dispensation in all pharmacies prepared for the e-Prescription, which is integrated with the already existing selling applications. In addition, SERGAS is providing this tool to reduce risks and speed up the initial implementation of the already mentioned tool, it is provided by SERGAS.

- Security: using electronic tools for the dispensation process should not have any impact in citizens' confidence about the use of their medical data. Thus, the system should guarantee that medical information is only used with professional purposes. To this end, there is a electronic personal identification systems (professional identification cards – TIS) that, in addition, guarantee the proper personal data protection during all the information exchange between all actors involved in the process.

  In addition, all these electronic procedures need to work with operative systems in line with electronic signature rules, avoiding problems in the work of professionals involved.

- Legislation: legislative development of fundamental Right to the honor, personal and familiar privacy, the image and privacy (article 18.4 of the Spanish Constitution) and Law for Data Protection.

Funding source	☐ Public EU funding	☐ Public Local funding
	☐ Public National funding	☐ Private sector (s)
	☐ Public Regional funding	☐ Voluntary contributions

Implementation costs (overall)	☐ Not applicable	☐ € 300.000 - 1 million
	☐ € 0 - 15.000	☐ € 1 million - 5 millions
	☐ € 15.000 - 50.000	☐ € 5 millions - 10 millions
	☐ € 50.000 - 100.000	X More than 10 millions
	☐ € 100.000 - 300.000	

Main results, scope and benefits
Please, describe the main results (qualitative and quantitative) for all stakeholders involved: you should mention issues such as impact, scope, added value and results achieved and/or expected by your

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initiative, including user impact and user satisfaction. (1 *page max + indicators of results + schemes if helpful*)

In 2009 IANUS was implemented in Primary Attention areas of all Galician hospitals. That means 2,775,971 medical histories available through IANUS system and more than 22.145 professionals using this tool. In fact, the use made by professionals was bigger than 17 million entries.

In the framework of this project other actions were implemented like, for instance e-Prescription or digitalization of medical image which are in use in more than 90% of public hospitals in Galicia.

e-Prescription started in 2008 and now is being implemented in all municipalities. In 2009, 41 million prescriptions were given electronically (63.81% of the total prescriptions) and in 2010 we have already 7.5 million of e-prescriptions, to more than 1,217,423 people.

In relation to pharmacies connected to IANUS, there is a progress from 38 in 2008 to 866 in 2009. In the same way, there was also a progression in the number of doctors using e-prescription, from a 75.2% in 208 to a 91.5% last year.

Regarding to accessibility, in 2009 there were 5.5 million of entries to the website of the Galician Public Services. That means an increase of 389% with reference to 2005 data.

The use of web services like consultation of the waiting list received 6,802 entries in 2009. Other records are: 1,701 people registered in the sms alert system and more than 36,000 requests to change doctor were made through Internet. In addition, in 2009, a 16.48% of population used internet to make a medical appointment (1% in 2005), 13,030 request for the health card were made by Internet and, at the end of the year, 141 health centers had e-medicine solutions implemented.

Among services to health professionals, we can point out the Virtual Office for Professionals (FIDES). In 2009, these services registered 547,554 entries. That means an increase of 127% with reference to 2008 data. Looking at training, we should talk about Maestro, the e-training platform created to give professionals an easy access to training plans. During 2009, there were 722 courses for 19,857 professionals.

Return of investment

It is very difficult to estimate the return of investment, since it is a universal system of health coverage. However, the economic returns are evident in relation to the additional availability of physicians for diagnosis and treatment time, the promotion of rational use and reduction of medical frauds.

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Benefits for the population

- A better perception of the patient situation, favourable for the doctor and the chemist.
- Reduction of appointments and procedures related with chronically ill patients and standardization.
- Easier provision of prescriptions of polymedicated chronically ill patients and lower level of

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prescriptions loss.

- Reduction of the insecurity caused by illegible prescriptions.

Benefits for the doctors

- Reduction of the number of appointments for prescription renewal.
- Reduction of the number of standardization, since standardization of prescriptions is removed to give way to the standardization of medical treatments.
- Increase of time that the doctor may devote to diagnostics and treatment.
- Information on the patient medical-pharmaceutical history and tracking of the treatments.
- Availability of mechanisms developed to help with prescription, based on cost, efficiency, interactions, etc.
- New communication channels with patients through chemists.

Benefits for the SERGAS (the Galician Health System):

- It enhances the quality of medical attention
- Availability of information in the whole value chain.
- Information in advance
- Simplification of the invoicing and reduction of administration processes.
- Enhancement of the rational use of medicaments.
- Increase of transparency and reduction of fraud.

Lesson learnt

Reusability and integration of the existing system

One of the keys of this project is the progressive integration of the new services on the already existing system, besides of the reusability and the updating of the old systems.

- Implementation of the new system in the total of the value chain.
- One of the keys of the Ianus and the e-prescription is the presence of solutions in the value chain. The e-prescription and the electronic distribution process are part of the health provision system.
- Universalization of the system.

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Sharing feautures
Independently of scale and application, the basic principles of design which support the e-health model can be applied to multiple experiences. The reusability and integration of the architecture in already existing components, like Electronic Medical History, Electronic Prescription, TIS systems for population and professionals, system of assessment of pharmaceutical provision, data base of sanitary products and medicines, can be applied to experiences on a smaller scale. Moreover, due to the Spanish health system structure, the process of electronic distribution has been created as part of the health provision system, and it cannot be viewed independently, the same way it cannot be applied to micro experiences. However, the methodology used to develop the electronic distribution can be applied independently. The architecture is product of a continuity plan, which has defined the availability needs, redundancy and recuperation of failures and contingency mechanisms, the scalability, both volumetric and functional, and the control of the distribution processes, as well as the governance of the development initiatives and creation of e-health solutions.

| **Could the GP be available for a DLA "on site" study visit?** | X Yes

☐ No

☐ Conditioned (*please specify*):
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Indicators for a GPs evaluation (proposal)

The 2nd TSC meeting (July) has to be able to select 5 GPs (among those proposed by partners) for DLA project study visits.

Proposal is to adopt a minimum set of orientative, common and/or general indicators as base of evaluation:

- **Expressed interest in deepening the GP by one (at least) or more partners**
- 1-3 max common indicators targeted on every single GP (e.g. number of users)
- 1-3 max specific indicators targeted on each topic area of DLA Manifesto (e.g. % of coverage for broadband access)

Following indicators are the proposed ones: they can be improved/changed/modified until

Area	Indicator	Example	Unit
Common indicators	**Expressed interest in deepening the GP by one (at least) or more partners**		N° of interested partners
	Users (effective)	Web Users Traffic Registered User	N°
	Scope	City, municipality, province, region	Indication about
e.Inclusion	Usability degree	WAI compliance	Yes/No
	Item integrated and level of integration (automatic, semiautomatic, aggregate, manual)		Indication about
e.Participation	Heterogeneous sources and level of integration (automatic, semiautomatic, aggregate, manual)	Regional Decision and public consultancies	N°
	Multi-channel services provided	PC, Totem, Mobile, Interactive Tv	N°
Networking	Network/Broadband coverage	Network coverage of small villages and islands	%
	Item integrated and level of integration (automatic, semiautomatic, aggregate, manual)		Indication about
Security	Security level	Networking, application	Indication about
	User access level	Login & Pwd, Smart-Card	Indication about
Advanced	Processes full digital		N°

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services	Level of dematerialization	User to PA	
		PA to PA	
	% of files full digital		%
	Time saved		%
	Cost saved		%