Information and communication technologies support in Catalonia

17 October 2016, Barcelona
AGENDA

1. Electronic prescription and medication plan: an opportunity to improve prescription (including outpatient hospital drugs project). Pilar López

2. Electronic prescription and interface communication between hospital and primary health care physicians through electronic messages. Rita Puig


4. Register of patients treatments in outpatient hospital drugs (RPT). Marta Pastor

5. Envolving role of DTC including prescribing guidance. Nicola Magrini
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CATALAN HEALTH SYSTEM - OUTLINE

- Heterogeneous sector
- Multiple providers
- Accessibility to services for citizens
- Different organization and operation models
- Corporate strategies on technological development
- Complexity in the exchange of information and knowledge

7.5M Citizens
70 Hospitals
421 Primary Healthcare centers
140 Social Health centers
240 Mental Health centers
3151 Pharmacies
CATALAN HEALTH SYSTEM – STRATEGIC PLAN FUNDAMENTALS

**Sustainable**, ensuring efficiency anytime

**Universal**, a system where no citizen is excluded

**Participative**, promoting the involvement of both professionals and citizens

**Equitable** access to healthcare for all patients

**Transparent**, avoiding any confusion and lack of transparency in the health system

**Public**, where all the service providers are publicly owned or are non-profit Institutions

**Diversity of providers**, respecting the singularities of each of the health care providers

**Quality**, ensuring a model based on excellence, safety and patient orientation
Electronic Prescription in Catalonia (ReC@t) – Facing Strategic Goals

1. Universal
   - Electronic Prescription is the structural tool in Primary Healthcare and it is reaching the maximum level of implementation in Specialized Care.
   - At a national level, we are working on making the dispensation of electronic prescriptions possible statewide, allowing the dispensation of electronic prescriptions prescribed in Catalonia from any pharmacy in Spain, and vice versa (interoperability).

2. Equitable
   - Electronic Prescription works for the whole territory to be adapted to all the System functionalities, both in Prescription and Dispensation.
   - Electronic Prescription works to ensure a high quality equitable access to medication everywhere in the territory.

3. Public
   - Electronic Prescription is implemented in all Public Hospitals in Catalonia for outpatients (publicly owned or non-profit Institutions).
   - The healthcare professionals who use the Electronic Prescription belong to the Public Health Department.
**4. QUALITY**

- Electronic Prescription provides access to the complete pharmacological information of the patient.

- Electronic Prescription includes all the necessary information into a single Medication Plan, so that patients can make a proper use of prescribed drugs and monitor their treatments.

- Electronic prescription favours the continuous improvement of the Quality and Safety of prescriptions, detecting incompatibilities or possible interactions between treatments and informing healthcare professionals.

- Electronic Prescription includes different tools, such as the Messenger Service, that allow interaction between professionals, both from Prescription and Dispensation areas, in order to improve communication and coordination between professionals.

- Electronic Prescription works to include all medicines and healthcare areas in order to provide a high quality, fully integrated service to patients.

- Electronic prescription is fully compliant with the most strict security and confidentiality standards.

**5. DIVERSITY OF PROVIDERS**

- The Electronic Prescription model considers a system in which the specific clinical workstations of each provider can be integrated with the core of the Electronic Prescription System, providing the same centralized services and functionalities to all of them.

- Electronic Prescription offers different versions of the System, so that each prescription provider can adapt to the best option according to their needs.

**6. TRANSPARENCY**

- Electronic Prescription promotes transparency among healthcare professionals, as it puts all the information of the patients’ treatments at their disposal, transversally.
7. PARTICIPATIVE

- Electronic Prescription enhances the commitment of healthcare professionals through the improvement of communication and coordination between them.
- Electronic Prescription involves healthcare professionals in the development and optimisation of the System, so that it is adapted to the needs of each area.
- Electronic Prescription encourages the patients to take responsibility on their own health, thanks to the possibility of accessing to certain content of the electronic prescriptions through the portal “My Health” and other mobility solutions.

8. SUSTAINABILITY

- Electronic Prescription reduces the number of bureaucratic visits to healthcare centers, whose only purpose is the renovation of chronic prescriptions, as it allows the generation of prescriptions for a period of up to one year of treatment.
- Electronic Prescription establishes mechanisms that promote rational drug use and that contribute to the reduction of medicines stocks at the patients’ residences.
- Electronic Prescription imply a significant cost saving compared to the use of paper prescriptions, in addition to an environmental improvement.
ELECTRONIC PRESCRIPTION IN CATALONIA (RECAT) – ADAPTED TO AN HETEROGENEOUS SYSTEM

- Information exchange
- Data validation
- Data security policies
- Safety rules application
FUNCTIONING OF ELECTRONIC PRESCRIPTION IN CATALONIA

1. Patient
2. Healthcare professional of Public Health Department
3. Personal Health Card
4. Medication Plan
5. Pharmacist
6. Medication Plan
Currently, 97.5% of prescriptions are prescribed electronically.

- The Electronic Prescription is fully deployed across the territory in the Primary Healthcare area and in the Pharmacies.

- Actually, the Electronic Prescription is expanding in the Specialized Care for outpatients. Specifically, the degree of centers that have begun the e-prescription in each section is:
  - 100% Public Hospital Network
  - 96% Mental Health Network
  - 100% Sexual and Reproductive Health Care
  - 89% Social Health Centers

- Until now, there have been dispensed more than 758 million electronic prescriptions to more than 6.6 million patients.
STRATEGIC PURPOSE OF ELECTRONIC PRESCRIPTION

The extension of the Catalan Electronic Prescription System improves healthcare and patient’s empowerment through the integration of ALL TREATMENTS’ information into a SINGLE MEDICATION PLAN.
MEDICATION PLAN IN ELECTRONIC PRESCRIPTION

- The Medication Plan includes the necessary information for the **correct observance** of the treatments concealed.

- The Medication Plan favors the **prescriptors and dispensers interrelationship**, became as a new channel of communication to them.

- Possibility of additional **prescription’s protection** in case the patient requests it, generating a **separated Medication Plan**.

- The treatments gather separately, depending on:
  - Chronic treatments or long-term
  - Acute treatments or short-term
  - Treatments just in case patient need it

- The Medication Plan contains a necessary **security code** to accede to the patient’s information.
INCORPORATION OF OUTPATIENT HOSPITAL DRUGS TO THE ELECTRONIC PRESCRIPTION

- One of the main current workstreams in Electronic Prescription aims to integrate all treatments into a single Medication Plan. Nowadays Electronic Prescription works to allow the professionals to prescribe and dispense hospital drugs to outpatients.

- Due to the complexity of the project, the new version of the Electronic Prescription which will include the prescription and dispensing of hospitals drugs will be subjected to a process of validation through pilot experiences:
  - 8 hospitals will test the model of outpatients taking home the drugs
  - 1 hospital will test the model of outpatients who are given the medication at the hospital
  - 6 hospitals will test the model of prescription and dispensing of Home Enteral Nutrition

- The pilot experiences will have 3 phases of execution:

<table>
<thead>
<tr>
<th>Technological phase (I)</th>
<th>Operative phase (II)</th>
<th>Extension phase (III)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Schedule</strong></td>
<td><strong>Environment</strong></td>
<td><strong>Objective</strong></td>
</tr>
<tr>
<td>Feb – Jul 2017</td>
<td>Virtual outpatients (test environment)</td>
<td>Adaptation of the workstations</td>
</tr>
<tr>
<td>Aug – Dec 2017</td>
<td>Real outpatients (reduced number)</td>
<td>Commencement of the electronic prescription and dispensing</td>
</tr>
<tr>
<td>Jan – Jun 2018</td>
<td>Real outpatients (progressive increase)</td>
<td>Gradual deployment of the electronic prescription and dispensing</td>
</tr>
</tbody>
</table>

All models have been validated with the Health Sector
OTHER LINES OF WORKSTREAMS BASED ON PATIENT

- **Centralized return of patients’ relevant information for healthcare professionals**

- **Evolution of the Safety Module** in electronic prescribing

- Increasing the use of the digital platform “Cat@Salut La Meva Salut” that gives the patient *access to relevant information about his treatment and allows him to print the current Medication Plan*

- **Provision of mobile applications** that allow a more agile access by the patient to relevant information in order to favor a better *adherence to treatments*

- Development of *therapeutic contents specially addressed to patients*, using the patient’s natural language and vocabulary
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**MAIN OBJECTIVES OF THE SAFETY MODULE IN ELECTRONIC PRESCRIPTION**

- Ensure that *all new treatment are compliant with the clinic security validation set* before being incorporated into the Medication Plan of a patient.

- *Centralize the management of clinical safety rules in a single system*, which processes the treatment data prescribed using external workstations.

- *Return security advisories online on any workstation* connected to the Electronic prescription system.

- *Allow gathering and analyzing information on the system usage* in order to improve the clinical security validation set.
FUNCTIONING OF THE SAFETY MODULE IN ELECTRONIC PRESCRIPTION

- When a healthcare professional adds a prescription to the Medication Plan, his clinical workstation sends the prescription to the Electronic Prescription Server (SIRE) online. Then SIRE connects with the Safety Module, which reviews whether the new treatments generate a security alert.

- If so, the Safety Module will return to SIRE the security alerts that are generated, which will be transferred by SIRE to the clinical workstation.
## SAFETY DIMENSIONS OF THE SAFETY MODULE

<table>
<thead>
<tr>
<th>Safety dimension</th>
<th>Number of safety rules</th>
<th>Main objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Drugs interactions</strong></td>
<td>442</td>
<td>Detecting interactions between drugs of greater clinical relevance, the use of which together can cause alteration of the effect of drugs and can be a problem of patient safety</td>
</tr>
<tr>
<td><strong>Therapeutic duplicities</strong></td>
<td>506</td>
<td>Detecting the coexistence of two or more medicines with the same active pharmaceutical ingredient and/or pharmacological activity in the treatment of a patient, that can cause alterations</td>
</tr>
<tr>
<td><strong>Medicines advised against old people</strong></td>
<td>44</td>
<td>Detect drugs advised against or contraindicated for patients older than 75 years</td>
</tr>
<tr>
<td><strong>Teratogenic drugs</strong></td>
<td>63</td>
<td>Detect drugs with teratogenic actions in women of childbearing age</td>
</tr>
<tr>
<td><strong>Maximum doses</strong></td>
<td>499</td>
<td>Detect cases in which the prescribed daily dose exceeds the maximum authorized daily dose</td>
</tr>
</tbody>
</table>
## INFORMATION CONTENT IN A SECURITY ALERT OF THE SAFETY MODULE

<table>
<thead>
<tr>
<th>Information</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Safety dimension</strong></td>
<td>Drugs interactions, therapeutic duplicities, medicines advised against old people, teratogenic drugs or maximum doses</td>
</tr>
<tr>
<td><strong>Short description</strong></td>
<td>Summary of the main data associated to the alert</td>
</tr>
<tr>
<td><strong>Adverse effects</strong></td>
<td>Description of the risk and the side effects if the practitioner adds the prescription to the medication plan of the patient regardless of the alert</td>
</tr>
<tr>
<td><strong>Clinical actions to take</strong></td>
<td>Description of the recommendations and therapeutic orientations to prevent the alert</td>
</tr>
<tr>
<td><strong>Severity</strong></td>
<td>Severity of the alert (high / medium)</td>
</tr>
<tr>
<td><strong>Alternative drug</strong></td>
<td>Alternative drug to prescribe to the patient</td>
</tr>
<tr>
<td><strong>Type of alert</strong></td>
<td>Indicator of whether or not the alert can be discarded (not blocking / blocking alert)</td>
</tr>
<tr>
<td><strong>Conflicting prescription</strong></td>
<td>Prescription with which the treatment has an interaction or duplicity</td>
</tr>
</tbody>
</table>
- **Maintenance and updating** of clinical content:

  ✔ New commercialized active ingredients - *every 3 months*

  ✔ New relevant clinical evidence - *every 3 months*

  ✔ Analysis of the use of security notices (accepted or discarded) – *every month*

  ✔ Actualisations based on occasional feedback from providers and regions’ representatives – *on request*

- Definition of security rules based on *new criteria related to the inclusion of Outpatient Hospital Drugs* – *in process.*
**DATA MINING** OF THE SAFETY MODULE

- The safety module is traceable, so *every month the data of the use of the safety module are analysed*:

**Quantitative analysis**
- Number of adapted providers to each safety dimension
- Number of safety notices returned to the workstations
- Number of discarded notices
- Number of accepted notices

**Qualitative analysis**
- Safety rules with a high degree of notices returned to the workstations
- Safety rules with a high degree of discarded notices

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**Data**
- Monitoring of the degree of adaptation of the providers to the safety module

**Objective**
- Detection of errors and needs of improvements in the safety rules
- Ensure the quality of the safety module’s content
SAFETY DIMENSION OF MAXIMUM DOSE (most widely implemented dimension currently)

- The objective of the “Maximum Dose” safety dimension is to detect the incorporation of treatments into the Medical Plan in which the prescribed daily dose exceeds the maximum authorized daily dose.

- To do so, the “Maximum Dose” safety dimension calculates de quantity of active ingredient prescribed by the practitioner and compares it to the maximum permitted dose, for all the electronic prescriptions entered in the System.

<table>
<thead>
<tr>
<th>Maximum doses</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>% Volume of prescriptions from adapted providers</td>
<td>85%</td>
</tr>
<tr>
<td>Number of safety notices</td>
<td>10,476</td>
</tr>
<tr>
<td>Number of discarded notices</td>
<td>5,813</td>
</tr>
<tr>
<td>Number of accepted notices</td>
<td>4,663</td>
</tr>
<tr>
<td>% Accepted safety notices</td>
<td>44.5%</td>
</tr>
</tbody>
</table>

- Nowadays, 85% of prescriptions are generated by providers adapted to the Maximum Dose safety dimension.
- Around 50% of the safety notices received by these providers are accepted by healthcare professionals.
**MAIN LINES OF WORKSTREAMS OF THE SAFETY MODULE**

- *Expansion of the current dimensions* to incorporate safety notices related with treatments of *outpatient* hospital drugs.

- *Adding a new safety dimension* to analyze the treatments’ duration.

- *Review the whole Medication Plan* using all the safety warnings on the practitioner request.

- *Register the safety warnings previously discarded* by a practitioner in a patient’s Medication Plan.

- *Apply safety warnings when dispensing*
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Register of patients treatments in outpatient hospital drugs (RPT)

Marta Pastor Fàbregas
Catalan Health Service

Barcelona, 17th October 2016
1.- What are outpatient hospital drugs?

2.- The basis of the register: Pharmacotherapeutic Harmonization Program

3.- Register of patients: main aims

4.- Register structure: How does it work?

5- Measuring results

6.- Conclusions
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Outpatient hospital drugs. Overview

- Hospital drugs for outpatients are drugs provided by public hospitals of Catalonia to patients who are not hospitalized. These pharmacotherapeutical treatments require a special vigilance, supervision and control by the multidisciplinary team of specialized care.

- Hospital drugs include different groups of medicines, among them antiretroviral drugs, biologics and cytostatics. These 3 groups represent 50% of the total expenditure in outpatient hospital drugs every year in Catalonia.

- 2015 figures in Catalonia: 156,858 patients. 883 M €  55 hospitals

- In order to rationalize the use of these drugs, the Catalan Health Service promoted in 2009 different strategies framed into two big groups:
  a) Drugs access programs (Harmonization)
  b) Register of patients
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Pharmacotherapeutic Harmonization Program in Catalonia

Who is it intended for?
What are the most pertinent alternatives?
What are the criteria for use?
What is the prescription variability?
What are the follow-up indicators?
What are the ultimate results for success?
How can equity of access be guaranteed?

Evaluation
Criteria for eligibility, follow-up and outcomes

Real world evidence:
- How effective is it?
- How safe is it?
How many people does it affect?
How variable are the outcomes?
How are the recommendations adhered to?

Financing

What is the proposed cost of treatment?
What should the fair cost of treatment be?
What is the value for money in terms of health?
How is the budget impacted?
How should the risk be shared?

Co-responsability and sharing risks

Patient registries and outcomes monitoring
<table>
<thead>
<tr>
<th>Categories</th>
<th>Advisory committees</th>
<th>Authorization</th>
<th>Registration and funding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use restricted to clinical criteria set by the harmonization program</strong></td>
<td>Clinical criteria of indication, follow up and outcomes</td>
<td>Hospital doctors and pharmacotherapy committee of the hospital</td>
<td>Minimum registration of clinical data</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Funding if compliance of clinical criteria</td>
</tr>
<tr>
<td><strong>Individualized authorization</strong></td>
<td>Clinical criteria of indication, follow up and outcomes</td>
<td>CatSalut Advisory Committee</td>
<td>Exhaustive record of clinical data</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Evaluation case by case</td>
<td>Funding only authorized patients</td>
</tr>
<tr>
<td><strong>Excepcional use</strong></td>
<td>Unfavorable / negative report</td>
<td>Hospital pharmacotherapeutic committees</td>
<td>Financed by the hospital</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Only few exceptions</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>previous application and CatSalut authorization</td>
</tr>
</tbody>
</table>
Outpatient hospital drugs register (RPT)

Assessed drugs and report
- Clinical criteria
- Individual authorization
- Diagnosis + Indication (D+I)

Not assessed yet drugs
- Exceptional use
- Provisional use
- Starting and follow up variables
- Application and evidence
- Diagnosis + Indication (D+I)

Off label
- Starting and follow up variables
- Documents
Where can we find the information?

- All the updated reports are freely available on the Catalan Health Service website.

<table>
<thead>
<tr>
<th>Farmàcia i medicaments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Política de farmàcia i del medicament</strong></td>
</tr>
<tr>
<td><strong>Normativa</strong></td>
</tr>
<tr>
<td>- CatSalut</td>
</tr>
<tr>
<td>- Ministeri de Sanitat, Serveis Socials i Igualtat</td>
</tr>
<tr>
<td><strong>Prestaciones farmacèutica</strong></td>
</tr>
<tr>
<td>• Recepta electrònica: projecte Rec@t</td>
</tr>
<tr>
<td>• Catàleg de productes farmacèutics</td>
</tr>
<tr>
<td>• Informes de facturació farmacèutica</td>
</tr>
<tr>
<td><strong>Prestaciones</strong></td>
</tr>
<tr>
<td>• Prestación farmacéutica</td>
</tr>
<tr>
<td>• Prestación ortoprotética</td>
</tr>
<tr>
<td>• Tratamientos amb productos dietoterapéuticos complexos</td>
</tr>
<tr>
<td><strong>Avaluació i harmonització farmacotèrpèutica</strong></td>
</tr>
<tr>
<td>• Programa d'harmonització farmacotèrpèutica de medicaments en l'àmbit de l'atenció primària i comunitària (PHF-APC)</td>
</tr>
<tr>
<td>• Programa d'harmonització terapèutica de la medicació hospitalària de dispensació ambulatòria (PHF-MHDA)</td>
</tr>
<tr>
<td>• Programa d'avaluació, seguiment i finançament dels tractaments d'alta complexitat (PASFTAC)</td>
</tr>
<tr>
<td><strong>Proveïdors del medicament</strong></td>
</tr>
<tr>
<td>• El CatSalut i la indústria farmacèutica</td>
</tr>
<tr>
<td>• El CatSalut i les entitats proveïdores</td>
</tr>
<tr>
<td><strong>Farmacoeconomia</strong></td>
</tr>
<tr>
<td>• Comissió d'Avaluació Econòmica i d'Impacte Pressupostari (CAEIP)</td>
</tr>
<tr>
<td>• Jornades i congressos en l'àmbit de la farmacoeconomia</td>
</tr>
<tr>
<td><strong>Acords de Risc Compartit en l'àmbit farmacotèrpèutic</strong></td>
</tr>
<tr>
<td>• Esquemes de Pagament basats en Resultats (EPR)</td>
</tr>
</tbody>
</table>
1.- What are outpatient hospital drugs?

2.- The basis of the register: Pharmacotherapeutic Harmonization Program

3.- Register of patients: main aims

4.- Register structure: How does it work?

5.- Measuring results

6.- Conclusions
What is it?
The register is a database that collects data of patients with treatments previously assessed and with a report (Oncology, AIDS, rheumatoid arthritis,..). These drugs have a high economic impact and it’s necessary to establish a criteria for use.

Why?
Limited and poor information about outpatient hospital drugs effectiveness and safety in clinical practice
Variability in access and potential inequity
Extremely high cost per treatment and high expenditure growth rate
Guarantee the accomplishment of reports

Outcomes
Improve the quality standards and efficiency of pharmaceutical care.
Harmonize the criteria for use of new drugs and guarantees access equity.
Monitor the use of drugs linked to a diagnosis
Assess health outcomes
In October 2016 we have ...

- 139,733 treatments registered
- 96,968 patients
- 303 indications
- 152 drugs (p.a.)
- 8 therapeutic groups (oncology, HIV, arthritis, GH,..)
- 64 hospitals
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**Basic data**

1. **Patient data:** personal and sociodemographic information related to the individual

2. **Treatment:** In this level it has to be informed the diagnostic, the treatment and the indication

**Additional data when required**

3. **Starting and follow up variables:** specific data to monitor the evolution of the treatment

4. **Starting treatment:** it informs about the status of the application (accepted / rejected)

5. **Starting treatment documents:** In this level, the documents related to the beginning of the treatment must be attached when required.

6. **Follow up documents:** In this level, the documents related to the different stages of the treatment must be attached when required.
Hospital drugs treatment register

1. REGISTER
   - Pathology
     - HCT individual authorization
     - Multiple sclerosis
     - Hepatitis C
     - Growth hormone
   - Starting variables
     - Specific data pathology and treatment
     - Quality of life
     - Test EDSS
     - Number of breaks
     - Viral load
     - Degree of fibrosis
     - Growth speed
     - IGF
   - Follow up variables
     - Response to treatment
     - Quality of life
     - Test EDSS
     - Number of breaks
     - Viral response
     - Growth speed
     - IGF
   - Discontinuity variables
     - Disease progression
     - Lack of response
     - Virologic failure
     - Unacceptable toxicity
     - Lack of follow up
     - Exitus

2. MEASURE

3. RESULTS

4. MAKE DECISIONS
How does RPT look like?

<table>
<thead>
<tr>
<th>Personal data</th>
<th>Clinical data</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nom</strong></td>
<td><strong>Domicili</strong></td>
</tr>
<tr>
<td><strong>Cognoms</strong></td>
<td><strong>CP i localitat residència</strong></td>
</tr>
<tr>
<td><strong>DN/INIE</strong></td>
<td><strong>TORRE DE CLARAMUNT</strong></td>
</tr>
<tr>
<td><strong>Dates, d'alta de naixement</strong></td>
<td><strong>Entitat de cotització</strong></td>
</tr>
<tr>
<td><strong>CIF</strong></td>
<td><strong>INSTITUT NACIONAL DE LA SEGURETAT SOCIAL</strong></td>
</tr>
<tr>
<td><strong>Estat i data de naixement</strong></td>
<td><strong>Tipus d'affiliació</strong></td>
</tr>
<tr>
<td><strong>A14/12/2001 CAPELLADES</strong></td>
<td><strong>RÈGIM GENERAL</strong></td>
</tr>
</tbody>
</table>

**Dades del tractament**

- **Tractament:** L01XE01 | Imatinib
- **Tipus de tractament:** Harmonització-MHDA
- **ATC:** L01XE01 | Imatinib
- **Indicació:** LCMIMAT
- **Catàleg de diagnòstic:** C11M10
- **Diagnòstic:** C921 | Leucèmia mieloide crònica
- **Concepte Facturació FSE:** 160510 | F. CITOSTÀTICS

**Dades bàsiques del tractament**

- **UP prescripció farmacològica:** 00916 | Hospital d'Igualada del CSA
- **UP seguiment clínic:** | Sense determinar

**drug**, **indication**, **hospital**
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Health outcomes: Hepatitis C

Genotype 1a (n=836) 93.3%  
Genotype 1b (n=2234) 94.3%  
Genotype 1c (n=7) 100.0%  
Genotype 1 Sense subtipar (n=53) 92.5%  
Genotype 2 (n=106) 85.8%  
Genotype 3 (n=393) 89.6%  
Genotype 4 (n=463) 91.1%  
Genotype 5 (n=1) 100.0%  

SVR Global (93%)  
N = 4,093
• 917 patients have started an ART treatment in 2015

• 89% of HIV naïve patients following a ART have a viral load under 50 copies after 12 months of treatment
Health outcomes: Rheumatoid Arthritis

N=102 naive patients

Results after 12 weeks of treatment

- Remission (n=24, 43%)
- Low activity (n=18, 32%)
- Reduction (n=14, 25%)

Respondents (N=56; 28%) vs Non respondents (N=46, 23%)
1.- What are outpatient hospital drugs?

2.- The basis of the register: Pharmacotherapeutic Harmonization Program

3.- Register of patients: main aims

4.- Register structure: How does it work?

5.- Measuring results

6.- Conclusions
Knowing health outcomes is essential to keep a high quality health service.

The register of patients treatments is the tool which will lead to fulfil the process of harmonization and improve the standards of quality and efficiency.

Benchmarking: to measure the quality of the hospital treatments and their comparison with standard measurements or similar measurements of other hospitals. The objective is to use this information to improve performance.

The Triple Aim for healthcare organizations: Improving Healthcare Outcomes

- Improving the patient experience of care (better care)
- Improving the health of populations (better health)
- Reducing the per capita cost of healthcare (better value)
AGENDA

1. Electronic prescription and medication plan: an opportunity to improve prescription (including outpatient hospital drugs project). *Pilar López*

2. Electronic prescription and interface communication between hospital and primary health care physicians through electronic messages. *Rita Puig*


4. Register of patients treatments in outpatient hospital drugs (RPT). *Marta Pastor*

5. Envolving role of DTC including prescribing guidance. *Nicola Magrini*