



# THE USEFULNESS OF COMPUTER-ASSISTED PRESCRIBING OF RESTRICTED DRUGS

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## BACKGROUND

Restricted use policy is established to guarantee the proper medication use. Pharmacy and Infectious Committee agree to authorize the use indications, according to the therapeutic protocols and clinical practice guidelines; once decided these medical prescription regulations, next step is pharmaceutical validation checking use requirements. Computer-assisted prescription provides to prescribers drugs information and facilitate pharmaceutical validation.

## PURPOSE

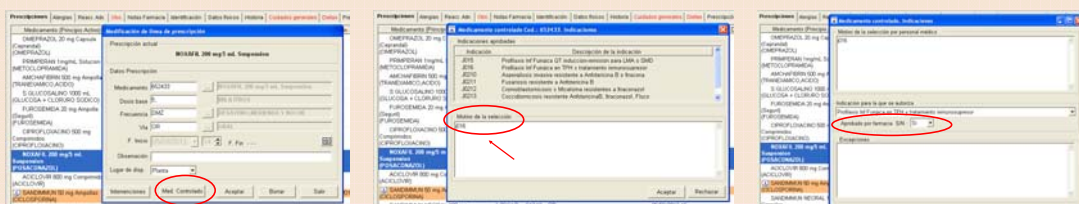
To assess computer-assisted prescription usefulness in restricted medication use in our hospital.

## MATERIALS AND METHODS

**Study period:** June 2010-May 2011  
**Data:** restricted drug prescribed authorized indications clinical unit prescriptions

| RESTRICTED DRUGS | CLINICAL UNITS    |
|------------------|-------------------|
| Prasugrel        | Haematology       |
| Levetiracetam    | Infectious        |
| Lenalidomide     | Surgery           |
| Filgrastim       | Neurology         |
| Erythropoietin   | Cardiology        |
| Posaconazole     | Neumology         |
| Micafungin       | Intensive Care    |
| Tigecycline      | Internal Medicine |
| Linezolid        | Digestive         |
|                  | Oncology          |
|                  | Rheumatology      |

1. Computer-application PRESEL was used for electronic prescribing. Restricted drugs and their authorized use indications were defined in PRESEL.
2. When prescribing these medicines it was necessary to type clinical indication; at the same time authorized indications were showed in the computer-monitor as a prescribing advice. During the validation process pharmacist accept or not prescription, and register prescribing indication in PRESEL.
3. At the time of this study, our hospital provided computer-assisted prescription for 49% of operative beds.



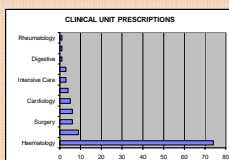
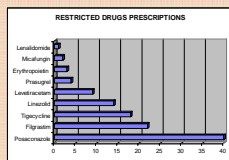
The computer-application indicates that the prescribed drug is restricted → The doctor must enter the reason for the selection → The pharmacist approve or not the prescription

## RESULTS

**Patients:** 5.210  
**Electronic prescriptions:** 50.990  
**Restricted drug prescriptions:** 113  
None of restricted drug prescriptions was rejected.

■ Antimycotics posaconazole and micafungin were the most prescribed (37%), followed by antibiotics tigecycline and linezolid (28%).

■ The majority of prescriptions were made by Haematology (65,49%), Infectious (7,96%), Surgery (5,31%) and Neurology (5,31%) clinical services.



| ANTIBACTERIALS FOR SYSTEMIC USE |   |               |
|---------------------------------|---|---------------|
| Drug                            | Indication  | Prescriptions |
| Tigecycline                     | Complicated skin and soft tissue infections   | 5             |
|                                 | Complicated intra-abdominal infections  | 8             |
|                                 | Infections caused by Acinetobacter baumannii  | 5             |
|                                 | Complicated skin and soft tissue gram-positive infections                               | 10            |
| Linezolid                       | Knee prosthesis Infection   | 1             |
|                                 | Nosocomial pneumonia caused by gram-positive susceptible pathogen (proven or suspected) | 3             |

| ANTIMYCOTICS FOR SYSTEMIC USE |  |               |
|-------------------------------|--|---------------|
| Drug                          | Indication   | Prescriptions |
| Micafungin                    | Prophylaxis of Candida infection in adult patients undergoing allogeneic haematopoietic stem cell transplantation  | 2             |
|                               | Invasive aspergillosis in patients with disease that is refractory to amphotericin B or itraconazole or in patients who are intolerant of these medicinal products;                      | 3             |
| Posaconazole                  | Prophylaxis of mycotic infection in immunocompromised haematopoietic stem cell transplantation recipients  | 30            |
|                               | Prophylaxis of mycotic infection in remission-induction chemotherapy for acute myelogenous leukemia (AML) or myelodysplastic syndromes (MDS) expected to result in prolonged neutropenia | 7             |

## CONCLUSIONS

■ In our hospital antimycotics and antibiotics are most of restricted medication used. Haematology and Infectious clinical services are the mainly prescribers.

■ Computer-assisted prescription applications are useful to define restricted medication and to check if prescriptions comply Pharmacy and Infectious Committee authorized indications.

