

(GFR=10–30 mL/min) and 30 mg/24 hours (GFR ≤10 mL/min or haemodialysis).

**Aim and objectives** To assess compliance with the recommendations for use of oseltamivir in two hospitals of our organisation (H1 and H2).

**Material and methods** This was an observational and retrospective study (December 2018–April 2019). Patients treated with oseltamivir in H1 and H2 were included.

Inclusion criteria: age >18 years, hospital admission.

Exclusion criteria: critical care admission, transfer to another hospital and discharge prior to finalising treatment.

**Collected data** age, gender, oseltamivir indication (positive PCR influenza A or empirical treatment), dosage, duration and PCR influenza A result.

**Results were analysed with Excel**

**Results** A total of 251 patients were included, mean age 78 (SD 14.4) years, 55% women.

In 65% of patients, treatments were initiated after a positive PCR influenza A result. In 35%, treatments were empirical; 95% of empirical treatments were from H2 where there was a 24–48 hour diagnostic delay compared with H1 (1–2 hours).

Duration of the treatment was 5 days in 35% of patients, ≥6 days in 22% and ≤4 days in 43% (78% of short treatments were empirical and were stopped after a negative PCR influenza A result).

Correctly adjusted treatments according to recommendations were 74%. Unadjusted treatments were underdosed in 93% and overdosed in 7%.

**Conclusion and relevance** In our study, there was a high percentage of empirical treatments. This could be decreased by having early diagnostic in all hospitals. Duration of treatment was adequate according to the protocol in only one third of patients. A set duration of treatment in the electronic prescription system could increase this number. Most treatments were adjusted to the recommended dosage. Unadjusted treatments were mostly underdosed. Training for professionals is necessary to explain the recommendations again.

## REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

### 4CPS-064 ADHERENCE TO ANTIRETROVIRAL TREATMENT IN PATIENTS WITH HIV

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**Background and importance** The goal of antiretroviral therapy (ART) is to reduce a person's viral load to undetectable levels. Poor adherence to ART is the first cause of therapeutic failure in patients infected with HIV. Furthermore, this fact can lead to HIV drug resistant strains.

**Aim and objectives** The main objective of the study was to determine the degree of adherence to ART and the factors that can influence adherence.

**Material and methods** A retrospective, observational and descriptive study of adherence in HIV over a 12 month period was conducted. HIV patients receiving ART were included. To measure adherence, we used the following methods: HIV viral load (VL) testing, CD4 count and dispensation record of our programme. VL was considered undetectable if

<20 copies/mL. Adherence data were calculated based on the units dispensed according to the days of treatment prescribed. Adherence was considered optimal when >95%. Some patients were selected for more comprehensive follow-up due to poor adherence.

Registered variables were sex, risk factors that could compromise adherence, analytical values (CD4 count, VL) and pill numbers.

Data were collected from an electronic prescription programme (Farmatools K.2.6) and the computerised medical history, MambrinoXXI.

**Results** During the study period, 128 patients receiving treatment were analysed: 50% were being treated with one tablet, 32% with two tablets and 18% with three or more tablets.

In 92% of patients, an undetectable VL was found. In 73%, CD4 level was >500/μmol. No relationship between VL or CD4 and adherence was found. Of the total number of patients receiving treatment, 92% were considered adherent and 8% had <95% adherence.

Risk factors that hindered adherence were a history of non-adherence (60%), lack of social support structures (50%), psychological distress (40%) and poor access to medication (30%).

**Conclusion and relevance** The results reflected a high adherence rate (>95%). Determination of analytical values, such as VL and CD4, and the record of dispensations of each patient, are methods for measuring adherence to ART.

It is important to monitor those patients who may have risk factors that compromise adherence. The hospital pharmacist can help to improve adherence.

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No conflict of interest.

### 4CPS-065 SWITCHING TO EQUIVALENT ALTERNATIVES: ANTIRETROVIRAL OPTIMISATION STRATEGY

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**Background and importance** HIV is currently one of the more expensive infectious diseases for the health system. Defining efficiency strategies is one way to save costs, in a system where resources are limited. A single tablet regimen (STR) is in some cases cost effective. Changing from one therapy to another does not compromise efficacy as it compares with equivalent alternatives.

**Aim and objectives** To describe an efficient strategy for switching to antiretroviral equivalent alternatives to save costs, and to perform a differences calculation simulation between them.

**Material and methods** We took into account the acquisition cost for each medication (according to our country regulations), and the dosage approved for them. We calculated the cost/treatment/year.

We analysed costs for antiretroviral treatments for patients and compared them with their equivalents. Avoided costs were calculated. We analysed all patients susceptible to a change to

a more efficient equivalent therapeutic alternative. A simulation was carried out on the more and less efficient scenarios, and differences in costs were calculated.

**Results** A total of 136 patients were receiving different antiretroviral treatments in our hospital: 31 patients (22.8%) were direct candidates to change their treatment to another more efficient equivalent. Seventeen patients were receiving dolutegravir/abacavir/lamivudine in a single pill, which costs 117 455€/year. Changing to its equivalent in two pills (abacavir/lamivudine generic+dolutegravir brand) would mean a saving of 29 937€/year.

Eleven patients were receiving emtricitabine/tenofovir–disoproxil/rilpivirine in a single pill, which cost 79 466€/year. By replacing with its equivalent in two pills (emtricitabine/tenofovir–disoproxil generic+rilpivirine brand) would save 43 060€/year.

The opposite strategy was also analysed. Three patients were treated with dolutegravir+rilpivirine (both brands), which costs 22 016€/year. Recently, its therapeutic equivalent has been marketed in a single tablet, which using would mean 4735€/year saved. All of these interventions would mean a total saving of 77 732€/year.

**Conclusion and relevance** Correct positioning, evaluation and selection of high cost medicines improves efficiency in the infectious diseases area, where medicines have a high impact on the health system. In our specific case, the optimisation strategy was agreed and established together with the internal medicine service of our hospital, selecting the drugs without compromising efficacy or safety in patients.

#### REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

#### 4CPS-066 CHANGING FROM COBICISTAT TO A RITONAVIR BOOSTED REGIMEN IN HIV POSITIVE PATIENTS

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**Background and importance** Recently, change from cobicistat to ritonavir is being promoted at a tertiary hospital for economic reasons. Therefore, there is a growing need to study what this switch may involve.

**Aim and objectives** Our objective was to describe the differences between the interactions profile of cobicistat and ritonavir with concomitant home treatment in HIV positive (HIV+) patients, consulting three databases (DDBB).

**Material and methods** A prospective study (January–May 2019) was carried out in HIV+ patients being treated with cobicistat boosted antiretrovirals, who came to the outpatient pharmacy of a third level hospital and whose treatments were changed to a ritonavir boosted regimen. Concomitant home treatment was registered by consulting the primary care online programme Horus. Interactions between cobicistat and ritonavir and domiciliary treatment were explored in three DDBB: Liverpool, Drugs.com and Micromedex. Severity level was assigned as follows: 4 (severe), 3 (moderate), 2 (minor) and 1 (no interaction). If the drug was not registered in the database, it was codified as 0. Differences in punctuations between cobicistat and ritonavir were registered.

#### Abstract 4CPS-066 Table 1

DDBB	Drug	Cobicistat	Ritonavir
Drugs.com	Atorvastatin	2	3
	Tramadol	0	2
	Trimethoprim–sulfamethoxazole	0	2
	Loratadine/cetirizine	0	2
	Metformin	0	2
	Bisoprolol	2	0
	Levothyroxine	0	2
Liverpool	Fluoxetine/sertraline	1	2
	Atenolol	2	0
	Metformin	2	0
	Levothyroxine	0	2
	Acenocumarol	0	2
Micromedex	Atorvastatin	1	3
	Omeprazole	0	2
	Escitalopram/sertraline	0	2
	Levofloxacin	0	2
	Metformin	0	2
	Amlodipine	0	2

Severity level: 4 (severe), 3 (moderate), 2 (minor), 1 (no interaction), 0 (drug not included in the DDBB).

**Results** A total of 174 patients were included: 75% were men, with a median age of 55 (48–59) years, receiving 3 prescribed medicines (range 0–17). Interactions between cobicistat and ritonavir and the 170 prescribed drugs were analysed. Calcifediol (n=81), atorvastatin (n=45) and omeprazole (n=34) were the drugs prescribed the most.

Cobicistat and ritonavir had a different interaction severity level in 19% of the drugs, according to Micromedex, 18% if checked in Drugs.com and 15% in Liverpool. The most important severity level changes are summarised in table 1.

**Conclusion and relevance** There were some significant differences between the interactions profile of cobicistat and ritonavir. Caution must be considered and drug databases checked when changing from a cobicistat boosted regimen to a ritonavir boosted one, in order to resolve potential drug interactions.

#### REFERENCES AND/OR ACKNOWLEDGEMENTS

No conflict of interest.

#### 4CPS-067 ANALYSIS OF USAGE OF DIRECT ACTING ANTIVIRALS FOR THE TREATMENT OF HEPATITIS C

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**Background and importance** The approach to chronic hepatitis C (HCC) has changed. Treatments with more than 90% effectiveness, fixed length treatments, daily dose and a good safety profile make treatment easier to handle.

**Aim and objectives** To analyse the use of direct acting antivirals (DAA) in the treatment of hepatitis C virus infection in a tertiary hospital.

**Material and methods** A retrospective, observational and descriptive study was conducted in patients who initiated