Materials and Methods A retrospective study was conducted from February to April 2012. All patients treated with VPA were included and grouped depending on whether VPA was part of their home treatment or not.

Variables collected were: dose, indication, total VPA serum concentration (C), drug interactions classified as ≥C by Lexi-Comp, glomerular filtration rate (GFR), Child-Pugh score, albumin and bilirubin.

Results 30 patients were treated with VPA, 24 of whom were on VPA before admission (15 epilepsy, 9 psychiatric disorders and 1 unknown reason).

Reasons for admission were: 5 convulsions, 12 psychiatric disorders and 13 causes unrelated to VPA. At discharge 27 patients continued on VPA with a mean dose similar to the dose at admission.

C was determined in 14 patients: 5 were within the reference range (50–100 mg/L); 2 above, achieving therapeutic levels before discharge and 7 below. In these latter cases, 3 had an albumin <4.2 g/dL, but none reached C > 50 mg/L after correcting it with the J. Hermida formula which is a theoretical method for normalising C in hypoalbumenic patients. GFR, Child-Pugh score and bilirubin were normal. Mean time between changes in dose and C determinations was 1.5 days (0–5 days).

21 drug interactions were detected in 15 patients, involving a total of 10 drugs. Only 2 interactions were reported: VPA meropenem and VPA lamotrigine.

Conclusions Changes in free fraction of VPA, due to hypoalbuminaemia, liver or kidney disease and hyperbilirubinaemia, must be detected.

C should be measured once a steady state has been achieved (3–5 days).

Drug interactions affecting VPA should be added to the pharmacy service's interaction notification programme.

No conflict of interest.

PHC-028 THERAPEUTIC DRUG MONITORING OF DARUNAVIR IN TWO DIFFERENT TREATMENT MODALITIES

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[1]J Rius, [2]A Aragonès, [1]M Cano, [3]T Puig, [1]F Ahamad, [1]JA Schoenenberger. *[1]Hospital Universitari Arnau de Vilanova, Pharmacy Service, Lleida, Spain; [2]Institut Recerca Biomedica, Laboratory, Lleida, Spain; [3]Hospital Universitari Arnau de Vilanova, Internal Medicine, Lleida, Spain*

Background Darunavir (DRV) is a protease inhibitor (PI) that when boosted with ritonavir is effective against both wild-type and PI-resistant HIV. It's relatively long half-life supports once-daily dosing (QD) in treatment-naïve patients. To treat treatment-experienced patients twice-daily dosing (BID) is preferred.

Purpose To analyse the need for therapeutic drug monitoring (TDM)-guided interventions for darunavir and their results in patients receiving darunavir/ritonavir both in BID and QD modalities.

Materials and Methods A prospective study that included 38 patients was performed: 21 (55.3%) in the BID group and 17 (44.7%) in the QD group. Plasma darunavir levels were determined using an HPLC method and viral loads (VL) were measured. Assessments were performed at inclusion and whenever VL was detectable. Patients with detectable VL load were subjected to intervention (change in dose and/or adherence reinforcement) and another plasma drug determination was scheduled. Interventions were considered successful if VL became undetectable.

Results Abnormal plasma drug levels (outside a 1000–8000 ng/ml range) were found in 13/83 (15.6%) determinations which correspond to 9 patients and in all cases detectable VL were also found. Among measures yielding normal levels the proportion of cases with detectable VL was 49/83 (59%). TDM-guided interventions were performed in 22/38 (58%) patients and were successful in 11 of them (7 BID and 4 QD).

Mean plasma levels in the BID group were greater than in the QD group: 3715 ng/ml (SD:±1679) and 2830 ng/ml (SD:±1030) respectively ($p < 0.02$). In the BID group cases with undetectable VL had mean plasma levels superior to those of cases with detectable VL: 4524 ng/ml (SD: SD:±1679) versus 3375 (SD:±1679), $p < 0.05$.

Conclusions TDM-guided interventions could be useful in patients receiving darunavir/ritonavir and experiencing viral failure, especially if the BID dosing modality is used.

No conflict of interest.

PHC-029 VANCOMYCIN PHARMACOKINETICS IN ALCOHOL AND INTRAVENOUS DRUG ABUSERS

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E Farré, P Villarón, D Soy, E Carcelero, J Ribas. *Hospital Clinic, Pharmacy Service, Barcelona, Spain*

Background Elimination of vancomycin is primarily by glomerular filtration (80–90%), but the liver may also be involved to a small extent. Chronic consumption of ethanol induces hepatic enzymes and can lead to hepatic damage. Both factors could affect vancomycin elimination. Moreover, the use of drugs of abuse could also affect vancomycin clearance.

Purpose To characterise vancomycin pharmacokinetic parameters in non-cirrhotic alcoholics, patients with alcohol-induced cirrhosis and intravenous drug abusers (IVDAs).

Materials and Methods Retrospective study in the aforementioned patients treated with vancomycin in whom therapeutic drug monitoring (TDM) was performed, between 2009–2012, in a tertiary University Hospital. Clinical and pharmacokinetic reports from TDM (PKS Abbot) were reviewed to obtain demographic characteristics, hepatic/renal surrogates, initial/recommended dosage, steady state (SS) distribution volume (VdSS), clearance (CL), CSSmin and CSSmax. The therapeutic target was 7–12 mg/L for CSSmin. Patients with renal failure (CLcr < 60mL/min) were excluded. Results are shown as a mean±SD (T-test for comparisons with controls).

Results Sixty-five patients were included. Demographic data were similar between the groups. 87.7% were men. Pharmacokinetic data is shown in table 1. As regards pharmacokinetic parameters, significant differences were only observed in CL in cirrhotic patients (#p = 0.02).

Conclusions Vancomycin CL is significantly decreased in cirrhotic patients, probably due to hepatorenal syndrome. Initial dose reduction might be considered. Vancomycin CL tends to be higher in alcoholics and IVDAs. Higher doses could be needed to obtain therapeutic concentrations. Therefore, vancomycin TDM is highly advisable in all these groups of patients.

Abstract PHC-029 Table 1

	Control	Non-cirrhotic alcoholics	Cirrhosis	IVDA
Number of patients	20	18	18	9
CL (L/h)	5.27 ± 1.47#	6.40 ± 2.16	4.27 ± 1.18#	6.53 ± 1.91
Vd^{SS} (L/Kg)	0.75 ± 0.33	0.64 ± 0.16	0.68 ± 0.10	0.59 ± 0.09
Initial dosage (mg/kg/day)	29.23 ± 5.75*	26.55 ± 7.35*	27.28 ± 9.01*	28.05 ± 6.12*
C^{SS}_{min} (mg/L)	9.76 ± 3.49	7.91 ± 4.26	10.37 ± 4.51	5.30 ± 3.04

*p > 0.05; #p = 0.02

No conflict of interest.

Other hospital pharmacy topics (including: medical devices)

OHP-001 A SURVEY OF PHYSICIANS' OPINIONS ON BIOEQUIVALENT PHARMACEUTICAL PRODUCTS

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M Ratnaparkhi, R Ghodke, M Patil. *Marathwada Mitra Mandal's College of Pharmacy, Department of Pharmaceutics, Pune, India*

Background Bioequivalence studies are basically comparative bioavailability studies designed to establish equivalence between generic and innovator products. Pharmaceutical equivalence is the pre-condition of bioequivalence. Medicinal products are described as pharmaceutically equivalent if they contain the same amount of the same active substances in the same dosage forms that meet the same or comparable standards.
Purpose To discover the opinions of physicians on bioequivalent pharmaceutical products and their use.
Materials and Methods 130 physicians were given a form with 10 questions. In this survey, questionnaires were answered by face to face interview.
Results

Q no.	Question	Yes	No	Sometimes
1	Do you think generic drugs are effective?	49%	36%	15%
2	Do you prescribe generic drugs?	35%	39%	16%
3	Do you think generic drug are bioequivalent?	44%	42%	14%
4	Can you see clinical results in patients who use generic drugs?	52%	25%	23%
5	Have you ever seen any problems with your patients who use generic drugs?	35%	42%	23%
6	Do you use generic drugs for yourself or relatives?	31%	64%	5%
7	Do you trust bioequivalent products?	50%	37%	13%
8	In your opinion are generic drugs safe to use?	67%	32%	1%
9	Do you encounter problems with generic drugs? In which category?	18% Antibiotics, analgesics	47%	N.R. 35%
10	Generally which categories of generic drugs are more prescribed?	Analgesics, antipyretics, antacids, antibiotics		

Conclusions The questionnaire shows that physicians are uncertain about whether generic drugs are as effective as their originals. Furthermore the results revealed that physicians prefer not to use generic drugs for themselves or their relatives. Most of them opined that generics are safe but less effective and therefore they avoid prescribing generic drugs especially antibiotics.

No conflict of interest.

OHP-002 ACCESSIBILITY, AVAILABILITY, AFFORDABILITY OF PRESCRIPTION DRUGS, ARETAIEIO UNIVERSITY HOSPITAL, ATHENS GREECE

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A Kotsiou. *Aretaieio University Hospital, Pharmacy, Athens, Greece*

Background Time is that wherein there is opportunity, and opportunity is that wherein there is no great time. Healing is a matter of time, but it is sometimes also a matter of opportunity (Hippocrates, Precepts Part 1)

Access to medicines, apart for its social dimension as a human right, has also had a great impact on financial issues since ancient time. With the rise in life expectancy the cost of treating many progressive degenerative and chronic diseases is tending towards a tremendous increase as well. New biotechnological methods in drug preparation claim long-term research and high financial investments resulting in very expensive medicines.

In response to the social demand for unlimited health budgets it is estimated that medicines expenditure is increasing annually by 5% in western countries. The growing use of generics could be considered a means of controlling the rising cost of healthcare.
Purpose To investigate alternative ways to cope with medicines shortages due to the financial crisis. Many pharmaceutical companies are requiring direct payment in order to supply their products. It is imperative to ensure that the patients will really take the drug treatment prescribed by their physicians.
Materials and Methods The reduction in the cost of medicines in Aretaieio University Hospital, Athens, Greece, during 2011 by the use of generics was estimated.

Sources used:

1. our pharmacy software data regarding medicines use in the hospital wards
2. data on prescription modification in cases of shortages, always in cooperation with the medical staff
3. data on official lower prices (competition between providers of generics or biosimilars)

Results Cost reductions were estimated at between 5–10% for contrast media (Radiology Department), and much more than 50% for antibiotics (Surgical, Obstetrics – Gynaecology, Paediatric Departments).
Conclusions Use of generics could be considered a means to control the rising healthcare costs. On the other hand medicines availability in Greece not only in hospitals but also in community pharmacies has become problematic for two main reasons: 1. the policy of reducing the prices of prescription drugs, leading to medicines' shortagse due to exports to other countries and 2. large pharmaceutical companies demanding direct payment, which is impossible under current financial conditions.

Abstract OHP-002 Table 1 Medicines cost reduction in Aretaieio University Hospital, Athens, Greece, 2011 (Surgical – Obstetrics, Gynaecology, Paediatric – Radiology Departments)

Medicines	Cost reduction	Comments
Quinolones	52% generic +26% brand (offer) Total: 78%	Brand offers 26% lower price
2nd generation cephalosporins	50%	Brand offers 16% higher price instead of 50% initially
Piperacillin/Tazobactam	22%	New brand offers equal brand –generic price
Omeprazole	31–40%	Depending on the generic chosen
Contrast media	5–12%	Depending on the generic chosen

No conflict of interest.

OHP-003 ADHERENCE AND DRUG-RELATED PROBLEMS IN BREAST CANCER PATIENTS ON ORAL ENDOCRINE THERAPY

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[1]P Mazzola, [1]AA Cruz, [1]JM Santos, [1]AT Rodrigues, [2]NMO Silva, [2]AER Silva, [2]RP Carvalho, [3]LC Teixeira. *[1]Faculty of Medical Sciences, Department of Clinical Pathology, Campinas, Brazil; [2]Women's Hospital Pr. Dr. José Aristodemo Pinotti, Pharmacy, Campinas, Brazil; [3]Faculty of Medical Sciences, Department of Tocogynecology, Campinas, Brazil*

Background The breast cancer mortality rate is high among Brazilian women, a fact probably related to late diagnosis of this condition. Adjuvant endocrine treatment with tamoxifen for 5 years can increase the survival rate of patients with hormone receptor-positive tumours. Because it is an orally administered drug, the patient plays an important role in compliance with the correct treatment (adherence) assuming much of the responsibility for her treatment. Therefore, Pharmaceutical Care has subsidies to influence treatment of these patients, identifying, preventing and resolving drug treatment problems (DTPs).