Materials and Methods Medical data of adult (age range, 18 to 85 years) hypertensive patients attending the hypertension clinic of Hospital Centre of Cova da Beira, Covilhã, Portugal, from March to August 2012, were prospectively obtained from medical records and analysed. Demographic variables, clinical data and BP values of hypertensive patients included in the study, as well as prescribing metrics, were examined on a descriptive basis and expressed as the mean±SD, frequency and percentages. Student's test and Mann-Whitney rank sum test were used to compare continuous variables and the χ^2 test and Fisher exact probability test were used to test for differences between variables in different categories.
Results In all, 47% of hypertensive patients (n = 44) had their BP controlled according to international guidelines. About 54% of patients with a target BP < 140/90 mmHg (n = 74) were controlled, whereas in patients with diabetes and/or chronic kidney disease (n = 20) the corresponding figure was only 20% (P = 0.007). The angiotensin II-receptor antagonists were the most prescribed drugs (57.5%), followed by calcium channel blockers (55.3%) and β-blockers (42.5%). About 82.4% hypertensive patients with comorbid diabetes were treated with an angiotensin-converting enzyme inhibitor or an angiotensin II-receptor antagonist.
Conclusions Many hypertensive patients prescribed antihypertensive treatment fail to achieve BP control in clinical practise; this control being worse among patients with diabetes or chronic kidney disease. As prescribing patterns seem to conform to international guidelines, further research is needed to identify the causes of poor BP control.

No conflict of interest.

GRP-035 BOCEPREVIR AND TELAPREVIR: SAFETY

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Background Protease inhibitors boceprevir and telaprevir were approved by the European Medicines Agency in July and September 2011 respectively for the treatment of hepatitis C genotype-1 in combination with peginterferon and ribavirin (triple therapy).
Purpose To describe the safety of boceprevir and telaprevir in clinical practise.
Materials and Methods All patients who received triple therapy prior to commercialization (compassionate use) with boceprevir or telaprevir to September 2012 were included. Data collected were: drugs administered for triple therapy, analytical parameters (haemoglobin, neutrophils and platelets) and subjective adverse effects. Patients were educated by the pharmacist about the medicines at the start of triple therapy and interviewed about adverse effects monthly with each refill of triple therapy.
Results Of the 36 patients with chronic hepatitis C included, 16 were treated with telaprevir and 20 with boceprevir. The most frequent adverse reactions were anaemia, neutropenia and thrombocytopenia. Anaemia was managed by reducing the dose of ribavirin (7 patients), erythropoiesis-stimulating agents (11 patients) and packed cells (7 patients). Neutropenia and thrombocytopenia were controlled with peginterferon dose reduction (2 patients) and granulocyte colony-stimulating factor (4 patients). Other adverse effects were fatigue or discomfort (16 patients), insomnia (5 patients), fever (5 patients), pruritus, dysgeusia, headache, nausea, diarrhoea and irritability. Eight patients had to discontinue treatment due to adverse reactions which were not controlled with dose adjustment or supportive drugs.
Conclusions All adverse events observed were reported in the EMA studies. Protease inhibitors have shown improve sustained virological response in clinical trials but these drugs are associated with a lot of adverse reactions. It is very important to have close collaboration between the physician and the pharmacist for medicines management, so that adverse reactions not described in the drug information will be reported to health agencies.

Abstract GRP-035 Table 1

Protease inhibitor	No. of patients	Anaemia	Neutropenia	Thrombocytopenia
		n (%)		
Boceprevir	20	17 (85)	14 (70)	15 (75)
Telaprevir	16	11 (69)	6 (38)	13 (81)

No conflict of interest.

GRP-036 CARDIOVASCULAR RISK IN HIV PATIENTS AND HCV CO-INFECTED PATIENTS TREATED WITH LOPINAVIR/RITONAVIR OR ABACAVIR

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Background An estimate of the risk of suffering a cardiovascular event guides the development of preventive strategies and treatment optimization. In HIV and co-infected HIV/HCV patients the state of chronic inflammation, altered endothelial function, a higher prevalence of smoking and antiretroviral treatment toxicity tend to increase the risk compared to the non-infected population.
Purpose To estimate the cardiovascular risk of HIV infected patients, HCV/HIV patients, and those treated with lopinavir/ritonavir or abacavir in a hospital. To describe the population and their main risk factors.
Materials and Methods This was a 6-month retrospective and observational study. Demographic and clinical data, such as lipid profile, immunological state or current treatments, were collected. Three different tools were used to estimate the 10-year cardiovascular risk: Framingham, SCORE and Regicor, in order to minimise the possible under-estimation for the infected Spanish population.
Results 56 patients matched the inclusion criteria. The average age was 48 (78.6% men). All patients had a good immunological state. The first modifiable risk factor was smoking (66.1%) dyslipidaemia the second (50%) and hypertension the third (37.5%). The co-infected population presented the main risk factors in higher percentages than the mono-infected group (81.3% smoked and 90% had dyslipidaemia). The number of patients identified as having a high cardiovascular risk with the estimation methods used was low. Framingham was the tool that classified more patients into this group (18.5% versus 12.73% SCORE and 1.85% Regicor).
Conclusions The results of this study, which accorded with previous publications, show the high prevalence of cardiovascular risk factors in this population, especially smoking and dyslipidaemia, showing the importance of identifying high-risk patients in order to prevent cardiovascular events. It also evidences the lack of a specific way of identifying these patients, which would help direct preventative efforts.

No conflict of interest.

GRP-037 CATHETER RELATED INFECTION TREATMENT PROTOCOL COMPLIANCE IN THE INTENSIVE CARE UNIT

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Background *The Hospital Infections and Antibiotic Policy Committee* guidelines recommend antibiotics to cover coagulase-negative staphylococcus and Gram-negative bacilli with vancomycin + aminoglycoside or aztreonam if Catheter-Related Bacteraemia (CRB) is suspected. Fungal coverage has to be evaluated.
Purpose To assess compliance with the antibiotic treatment protocol in the CRB in the Intensive Care Unit (ICU).
Materials and Methods Observational prospective 6-month study in a 32-bed ICU in a tertiary hospital in patients hospitalised ≥48 hours carrying a Central Venous Catheter (CVC).

Demographic and antibiotic treatment were recorded and compared with the empirical treatment recommended.
Results From 8 September 2011 to 8 March 2012, 596 patients were admitted to ICU; 571 patients used CVC; 390 (68.3%) males, mean age 61.0 ± 15.6 years; the number of CVC used was 844, equivalent to 5578 CVC days.

During this period 114 CVCs were removed in patients with fever and 11 cases of CRB were confirmed (10 patients); incidence 1.97 CRB/1000 CVC days.

Microbiology: 1 *Morganella morganii* (treatment levofloxacin + piperacillin/tazobactam); 2 methicillin-sensitive *Staphylococcus aureus* (one treated with meropenem, another levofloxacin + teicoplanin); 3 *Staphylococcus epidermidis* (one treated with linezolid, the second with piperacillin/tazobactam + teicoplanin, and the last with linezolid + meropenem + caspofungin); 1 *Escherichia coli* (treatment piperacillin/tazobactam); 1 *Pseudomonas aeruginosa* (treatment piperacillin/tazobactam); 2 carbapenemase-positive *Klebsiella pneumoniae* (treated with piperacillin/tazobactam + voriconazole) and 1 *Candida glabrata* (patient received fluconazole + levofloxacin).

Empiric antibiotic treatment wasn't correct in 8 cases of CRB, lacking empirical Gram-positive coverage in 7 cases and Gram-negative in 1 case. However, according to microbiological results, bacteraemia coverage was correct in 90%.
Conclusions Protocol compliance is low in the ICU for empirical treatment of CRB. A large number of CVCs were removed for fever with no clear correlation with CRB. Patients with fever of unknown origin receive broad-spectrum antibiotic treatment including antibiotic coverage of a wider spectrum than is strictly necessary for CVC infection. Yet 72.72% of patients would not receive appropriate empirical treatment if CRB was suspected.

No conflict of interest.

GRP-038 CHEMOTHERAPY-INDUCED NAUSEA AND VOMITING IN BREAST CANCER PATIENTS: EFFECTIVENESS AND SAFETY OF ANTIEMETIC TREATMENT

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Background Chemotherapy-induced nausea and vomiting are two of the most frequent manifestations that appear in cancer patients that significantly affect the course of their disease.
Purpose The objectives of this study are:

- to describe the antiemetic treatment used in patients with breast cancer treated with chemotherapy,
- to determine the degree of adaptation to the good clinical practise guides for the management of this type of complication, in other words how closely treatment followed the ASCO, MASCC and NCCN guideline recommendations,
- to analyse the effectiveness of those treatments and known adverse reactions that patients may suffer because of antiemetic or chemotherapy drugs.

Materials and Methods A descriptive, transversal and observational study of one month. The study included breast cancer patients from the day hospital who had received at least one previous chemotherapy cycle. Variables were collected using a questionnaire completed by the patient and pharmacy service software.
Results Of 47 patients, 32 agreed to participate in the study, with a mean age of 50.7 years (SD = 9.8). On day 1 post-chemotherapy, 34.4% of treatments did not follow the guidelines and on days 2, 3 and 4 this increased to 46.9%. 31.3% of patients experienced acute nausea and 15.6% acute emesis, 43.8% developed late nausea and 18.75% late vomiting. The number of patients with anticipatory nausea and vomiting was lower. The complete response to antiemetic treatment (absence of nausea, vomiting and need for antiemetic rescue medication) was achieved in 50% of patients. The most common averse events suffered by patients were fatigue, weakness (75.0%) and insomnia (56.3%).
Conclusions The lack of compliance with guidelines together with the results obtained of inefficiency of the treatment mean that we require new therapeutic strategies to allow us to obtain better control of emesis.

No conflict of interest.

GRP-039 CLASSIFICATION OF THE PHARMACEUTICAL INTERVENTIONS MADE USING THE ISOFAR PROGRAMME

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Background A variety of errors in the medication process means reduced safety for the patient and less effective treatment.
Purpose To analyse from the Unidosis area the types of intervention, medicines-related problems (MRPs), impact and savings recorded in the ISOFAR programme.
Materials and Methods A retrospective analysis was performed of the interventions made by the Pharmacy service since the establishment of the ISOFAR programme (from March 2007 to April 2011). Each intervention was recorded and a note made in the patient data: type of intervention, MRPs, impact and savings of the intervention.
Results In the period of the study a total of 6116 interventions covering: change of drug (52%), maintenance of treatments not included in the Hospital Pharmacotherapeutic Guide (23%), incomplete medical orders (15%), discontinued drugs (4%) and other reasons (6%) were recorded. The MRPs detected with the interventions were classified as: change by Therapeutic Exchange Protocol (TEP) (26.8%), necessary drug but not included in the TEP (22.9%), no adjustment to protocols (14.6%), change discussed (10.1%) and incomplete order (2.1%). In 53% the impact of the intervention was on effectiveness and in 24% on safety. The total savings in the evaluated period reached 184,153.47 euros.
Conclusions The most frequent intervention was a change of medicine probably due to the physician's ignorance of the Hospital Pharmacotherapeutic Guide and the Therapeutic Exchange Protocol; therefore it would be appropriate to consider the inclusion of new drugs in the HPG. A high percentage of medical orders were badly written, so the patient did not receive the medicine. The interventions were intended to improve the efficacy and safety of the prescribed drugs and moreover provide an important financial saving.

No conflict of interest.