

Purpose To demonstrate the cost of care by embolization of intracranial aneurysm and to understand relation between the cost and clinical patient parameters.

Materials and Methods Between January 2010 and April 2012 48 patients were treated by embolization of cerebral aneurysms. The cost of pharmaceutical products (drugs and medical devices) was assessed by using the micro-costing method that takes into account all direct costs and the overall cost of care was calculated using data from the hospital's information system.

Results In total, 48 patients were treated, mean age 52.4 ± 12.5 years. The sex ratio M/F = 0.71. 26 patients were covered by health insurance (52.2%). The median overall stay within 10 days [5–11] in ICU was 1 day [1 to 2] and in the medical unit was 6 days [3 to 9.75]. The overall average cost of treatment was €9,697.8, varying from €4,784.3 to €32,172.3. The cost of pharmaceutical products was on average 57.6% of the overall cost. While the average cost of consumables was €5,612.4 with a range of €2,499.1 to €16,370.8. Length of stay does not influence the overall cost of care, but the cost is influenced by the amount of embolization material.

Conclusions The cost of pharmaceutical products in the endovascular treatment of intracranial aneurysms remains high and represents a major handicap for the development of this technique in countries with low coverage by health insurance. As we mentioned before, this latter overall cost is especially influenced by number of embolization materials and number of aneurysms.

No conflict of interest.

OHP-076 THE INCIDENCE OF BACTEREMIA DUE TO CATHETERS AND THE COST OF ANTIBIOTICS BEFORE AND AFTER IMPLEMENTATION OF THE ZERO BACTEREMIA PROJECT

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Background Primary bacteraemia and bacteraemia caused by catheter infections entail a high pharmaceutical cost. The 'Zero Bacteraemia Project' (BZP) for central intravenous catheter (CVC) use in invasive therapies showed a decrease in the number of bacteraemia cases and a financial effect on hospitalizations.

Purpose To study the number of primary bacteraemia and bacteraemia cases caused by catheter infections among patients hospitalised in our Intensive Care Unit (ICU) and the pharmaceutical cost after implementation of the CVC guides. We compared these data to those obtained from 2007–2008.

Materials and Methods We retrospectively studied 2353 patients who were admitted to our Intensive Care Unit. 1280 patients were studied before BZP (2007–2008) and 1073 after BZP implementation. The BZP implied: catheter insertion with maximal sterile barrier precautions in ICU, correct hand washing, hygienic precautions when using CVCs and the removal of unnecessary catheters. We compared the pharmaceutical cost in antibiotics in both periods. We also studied the five most-used antibiotics in this hospital for the treatment of catheter-related infections suffered by the sample group in this ICU. The data were obtained by the programme 'ENVIN-ICU'.

Results A total of 35 pre-BZP and 13 post-BZP catheter-related bacteraemia cases were detected. 5.14 and 2.17 bacteraemia cases for every 100 patients with CVC. A 37% reduction was observed in the incidence of bacteraemia. The pharmaceutical cost just in antibiotics for the 35 patients infected during the first period amounted to 3100.68 euros. However it dropped to 2388.93 euros during the following period. A 23% saving was observed on the antibiotics consumption.

Conclusions The data from this study show that the use of the 'Zero Bacteraemia' policy in the process of inserting and monitoring CVCs is useful to reduce the number of infections. A statistically significant decrease in the number of bacteraemia cases and a monetary saving in antibiotics were found too.

No conflict of interest.

OHP-077 THE ROLE OF PHARMACISTS IN AN ITALIAN MODEL OF ECONOMIC SUSTAINABILITY AND INNOVATIVE TREATMENTS

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Background Italy is one of the European countries where a Risk Sharing Scheme between healthcare institutions and pharmaceutical companies has been widely implemented. It is a new model proposed to accelerate the authorisation and the availability on the market of new drugs. Since September 2007, the Italian drug agency has developed a web register to record data to monitor patients who receive medicines under a Risk Sharing Scheme: the physician prescribes medicines from a list of high-cost oncology drugs and the Italian drug agency validates each prescription and e-mails the hospital pharmacy to release the drug. The non-responding patients are documented in the web register by the health authorities and the pharmacist applies for reimbursement to the pharmaceutical company. Since 2011, Sicily Region has had a hospital pharmacist officially appointed in each pharmacy department to be in charge of obtaining refunds from manufacturers for undocumented non-responding patients and to supervise the pay-back procedures.

Purpose To quantify the amount clawed back from manufacturers after the appointment of the Risk-Sharing pharmacist.

Materials and Methods We detected and examined unresponsive patients recorded in the Registro AIFA-onco. The pay-back procedures were subsequently completed.

Results The number of registered patients increased by 83% and 451 non-documented patients were recorded: 190 Erlotinib, 103 Sorafenib, 57 Sunitinib, 38 Lapatinib, 14 Everolimus, 1 Pemetrexed, 20 Bevacizumab, 20 Cetuximab, 12 Gefitinib, 2 Vinflunine, 16 Lenalidomide, 3 thalidomide, 1 Panitumumab, 7 Bortezomib, 4 Azacitidine, 3 Trabectedin.

The ex-factory expense was €6,340,011.66: €431,063.89 recovered, €145,678.92 is waiting for reimbursement and €136,220.50 has been denied reimbursement.

Conclusions The appointment of a pharmacist enabled us to monitor pay-back procedures and assess responding and non-responding patients reliably.

No conflict of interest.

OHP-078 TREATMENT OF POSTOPERATIVE ANAEMIA IN ORTHOPAEDIC SURGERY: A BUDGET IMPACT ANALYSIS FROM A HOSPITAL PERSPECTIVE

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Background Standard postoperative anaemia management includes oral iron or intravenous iron supplementation (iron sucrose complex, ISC), erythropoietin therapy and blood transfusion. Introduction of a new intravenous iron formulation (ferric carboxymaltose, FCM), more expensive than ISC but with simplified administration modalities, could have economic consequences for hospitals.

Purpose To assess the budget impact of introducing FCM in the current practise for treating postoperative anaemia in orthopaedic surgery.

Materials and Methods A budget impact model (BIM) was built from a hospital perspective. Study population consisted of patients who underwent total hip or knee replacement in 2011. Costs are estimated by micro-costing for treatment costs and questionnaire for nursing costs. A reference case is based on the present patient case-mix. Simulations consider different substitutions: simulation A 100% ISC for FCM, simulation B 100% ISC and 50% oral iron for FCM and simulation C 100% ISC and 100% oral iron for FCM. One-way sensitivity analysis is applied to simulations.

Results Population: 314 patients (210 women) underwent 327 operations (205 total hip replacements), mean age was 71.6 years. Costs per treatment: oral iron €0.57, ISC €60.48, FCM €82.46 and transfusion €431.13 (no patient received erythropoietin treatment during hospitalisation). Average costs per patient: reference case €161.63, simulation A €169.83, simulation B €195.93 and simulation C €219.85. Total costs per year: reference case €44 124.20, simulation A €46 364.85 (+5%), simulation B €53 488.94 (+21%) and simulation C €60 018.12 (+31%). Discussion: BIM is very sensitive to variations in transfusion rate, moderately sensitive to variations in treatment costs and insensitive to variations in nursing costs. Economically, simulation A is feasible for many patients, simulation B is feasible, but simulation C is not.

Conclusions FCM will be added to the hospital formulary. A further study is needed to define substitution modalities in the real-life situation. BIM has contributed to this decision-making process.

No conflict of interest.

OHP-079 TUMOR NECROSIS FACTOR BLOCKERS IN RHEUMATOLOGY: CONVENTIONAL VERSUS OFF-LABEL DRUG DOSAGE

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Background Drug dosage modifications are a common clinical practise regarding Tumor Necrosis Factor (TNF) blockers, using posologies not specified on the authorised product information summary. This practise has a significant financial impact on the healthcare system.

Purpose To revise and investigate actual drug dosages in our Hospital's rheumatology service for conventional TNF blockers.

Materials and Methods The Pharmacy Service analysed the internal data record for rheumatology patients treated during April 2012 and for at least one year with infliximab (IFX), etanercept (ETN) or adalimumab (ADA). Off-label indications were excluded. Therapeutic indication, initial and current posology were recorded.

Results Number of patients by drug;

IFX	ETN	ADA
128	152	121

Number of patients by indication:

RA	AS	PA	JIA
208	109	79	5

RA: Rheumatoid arthritis, AS Ankylosing spondylitis, PA psoriatic arthritis, JIA: Juvenile idiopathic arthritis

Regarding posology, 261 patients (65%) were on a conventional dose (CD), 93 (23%) on a reduced dose (DR) and 47 (12%) on an increased dose (DI)

Percentage of patients by drug on CD, DR or DI was;

Treatment/posology	CD	DR	DI
IFX	33%	35%	32%
ETN	79%	21%	–
ADA	82%	14%	4%

Percentage of patients by indication was;

Indication/posology	CD	DR	DI
RA	65%	19%	16%
AS	59%	32%	9%
PA	72%	24%	4%
JIA	80%	20%	–

Conclusions Only 65% of patients using TNF blockers on rheumatology use a CD while a quarter of them have a reduced posology.

Infliximab is the drug that requires more dosage modifications, on almost 2/3 of patients.

AS and PA are the indications that allow more DR.

Drug dosage revisions at the end of the first year of treatment allow an important number of patients to reduce their dose while controlling their disease and it is a relevant efficacy instrument.

No conflict of interest.

OHP-080 USE OF CHEMOTHERAPY NEAR THE END OF LIFE

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Background Appropriately timed cessation of chemotherapy is integral to the patient's quality of life.

Purpose To describe and evaluate the use of chemotherapy in cancer patients in their last days of life.

Materials and Methods Retrospective observational study that included all cancer patients who died in our hospital in 2011. Information sources used were: a) Mambrino for the age, date of death of the patient and clinical charts; b) Oncofar to record the type of cancer, the last cycle of intravenous (IV) chemotherapy received, the historic administration, lines of treatment and the percentage of the last dose received; c) APD-Athos to review data from the patient's hospital stay and outpatient oral cytostatics dispensing. We collected for each patient their demographics, pharmacotherapy, the temporal interval between the last chemotherapy administration and death of the patient and the number of days in hospital one month before death.

Results A total of 94 patients (30% female) died in 2011 in our hospital. Of these, 10 patients didn't receive chemotherapy, 10 received IV chemotherapy combined with oral, 4 received oral chemotherapy alone and 70 IV chemotherapy alone. Tumours with the highest number of deaths were non-small cell lung cancer (21), head and neck cancer (11) and colorectal cancer (10). The most common last chemotherapy regimens were combinations of carboplatin (16) (especially with pemetrexed and paclitaxel), gemcitabine (11) (mostly alone), combinations of cisplatin (9), paclitaxel (9) (alone or combined with carboplatin) and monoclonal antibodies (9) (in 67% combined with bevacizumab); the most frequent oral chemotherapy drugs were erlotinib (4) and temozolomide (3). Of the 80 patients who received IV chemotherapy, 27.5% (22) received chemotherapy in the last 14 days of life, another 27.5% (22) received chemotherapy between 15 and 30 days before death, 21.25% (17) between 31 and 60 days, 13.75% (11) between 61 and 90 days and 10% (8) more than 90 days before death. In addition, 14% (12)