the prescribing physician’s response. The pharmacists evaluated the clinical significance of the interventions based on their own clinical judgments. Analyses were performed using descriptive statistics. RESULTS: A total of 504 interventions were documented over the 5-month study period. On average each intervention took 15 ± 14 (median, 10) minutes, ranging from 1 minute to 3 hours. The most common interventions performed were on drug regimen change (n = 237; 47%), drug choice (n = 128; 25%) and drug information issues (n = 106; 21%). Dose change (n = 153; 30%) and patient education (n = 54; 11%) were the most frequent interventions performed in the drug regimen change and drug information categories, respectively. The most common indications for which interventions were made were infectious (n = 100; 20%) and respiratory (n = 77; 15%) diseases. Efficacy was improved and toxicity avoided in 38% (n = 193) and 28% (n = 140) of the interventions, respectively. Potential fatalities or end-organ damage was avoided in 1.6% (n = 8) of the cases while interventions of major significance was recorded in 43% (n = 213) of the interventions. CONCLUSIONS: The data show that clinical pharmacists play an important role in drug safety and efficacy to optimize pharmaceutical care as part of the multi-disciplinary team approach in the hospital.

**PHP42**

EVALUATION OF THE AFTERNOON OUTPATIENT CLINICS OPERATION AT THE UNIVERSITY HOSPITAL IN LARISA

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OBJECTIVES: To evaluate the operation of the Afternoon Outpatients Clinics (AOC) at the University General Hospital of Larissa. The operation of AOC is a relatively new institution in the country, introduced in 2001 by the 2889 NHS reform law. METHODS: Descriptive and comparative analysis of data from 2002 of the AOC introduction up to 2006 is done. Data emanate from the 5th Region Health Authority. Clinical and economic indicators have been used for the evaluation based on medical specialties, diagnostic and professional categories, operational activities and financial inputs and outputs. RESULTS: A progressive increase in AOC visits has been estimated, reaching 82% of total hospital outpatient visits with surgery accepting the bigger volume of visits. Their income presents a 12.6% mean annual increase while expenses reached 17.9% respectively. Financial resources of surgical cases increased 63% and pathological 25% over the period 2002–2006, with a 27% income increase of total hospital outpatient visits with surgery accepting the bigger volume of visits. CONCLUSIONS: The operation of the AOC is encouraging, since it motivates health professionals to increase their income, the hospital to exploit its full potential, offers patients access to quality health care and covers unmet needs. The fact that the operation of the AOC is based on patients’ direct payments remains a contradiction with the full coverage of the Greek population for the provision of outpatient and impatient care in the public sector. The lack of contracting negotiations between the social insurance funds and the regional or hospital authorities remains a problem for which the state owes to make policy decisions, since the prices that are overwhelmed are almost competitive to the private sector and overload disproportionately the lower incomes.

**PHP43**

GREEK HOSPITALS’ SUPPLY CHAIN MANAGEMENT

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OBJECTIVES: To register the opinions of the employees as concerned the supply chain management, which has been adopted from hospitals. METHODS: Data were collected via a questionnaire and were processed by using the logistic regression method. A total of 250 people were asked, all employees of health care industry. RESULTS: Only 6.5% of the employees knows the cost of the materials they use and 82.2% of them state that if they were aware of the cost of the materials, they would certainly use them more wisely. Also, 55.1% of the survey participants were dissatisfied with the supply chain procedure and 55.6% would rather each clinic or laboratory managed its supplying by itself. Finally, 59.2% of the employees believes that there are no incentives and control as far as hospital’s supply chain management. CONCLUSIONS: There is a pressing need for the Greek hospitals to re-organize their supply chain management in order to reduce cost and offer quality health care.

**PHP44**

INEQUALITIES IN THE FINANCING OF DRUGS AMONG AUTONOMOUS REGIONS IN SPAIN

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OBJECTIVES: To identify and analyse differences in the financing of drugs between Autonomous Regions (AR) in Spain. METHODS: A structured literature review on the IME, Scielo, Doyma, Medline, Cochrane, national and AR official bulletins, relevant Spanish scientific associations and AR health web pages, and general and specialised press, up to June 15, 2007. RESULTS: Nine AR legislative documents were identified, one national working document, two press releases, one AR instruction, four scientific articles and two ministerial documents. The most important findings are as follows. Navarre and Andalusia finance some drugs excluded from national public funding by the Royal Decree 1663/1998. Navarre, La Rioja, Extremadura and Madrid finance smoking cessation products for the general population whereas Cantabria and Catalonia only to some population groups. The postcoital pill is financed in Andalusia, Cantabria, Catalonia, Canary Islands, Aragon, Asturias and Galicia. Erectile dysfunction drugs for patients with medullar damage are financed in Valencia, Murcia, Balearic Islands and Castile la Mancha. Differences have been detected in the financing level (reduced co-payment or free of charge) of several drugs for specific population groups. Castile Leon has a reduced co-payment in antiviral and antifungal drugs for cancer patients. Extremadura finances the totality of the drugs to chronic patients younger than 14 years old and families with more than 3 children, and Valencia finance total treatment costs of tuberculosis drugs. CONCLUSIONS: There are differences in the financing of various pharmaceutical products with low intrinsic value, life-style drugs and preventive drugs. These inequalities may be perceived as a reason of inequity or may reflect the intention to redistribute health care resources among AR’s preferences. It is necessary to evaluate the preferences of the population and the way these differences affect their health status.

**PHP45**

THE REIMBURSEMENT OF ORPHAN DRUGS ACROSS EUROPE

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OBJECTIVES: Orphan medicinal product legislation was adopted in Europe in 2000 with the aim of promoting the devel-
HEALTH CARE USE & POLICY STUDIES—Health Care Research & Education

PHP46
CATEGORISING RESEARCH: WHERE IS THE FOCUS?
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OBJECTIVES: The quantity of research generated is increasing yearly. It is of interest to determine the types of research being published to assess the content of the current knowledge base. Research can be categorized as randomized controlled trials (RCTs), observational studies (OS), systematic reviews (SR), or economic studies (ES). Our aim was to determine the proportion of research being conducted in these categories and to assess the relative proportions of each across time. METHODS: A citation search was conducted in Medline on 18 June 2008. Search filters for RCTs, OS, SR, and ES were implemented to provide an estimate of research conducted in these categories for the years 1950–2007. The prevalence of each type of research was calculated and changes over time were analysed using logistic regressions. RESULTS: The total probable citations retrieved were: 740,599 for RCTs, 1,217,246 for OS, 1,287,915 for SR, and 325,625 for ES. The proportion of research conducted for each of these overall was 20.7%, 34.1%, 36.1%, and 9.1%, respectively. From 1977 to 2007 there was a 12-fold increase in probableRCTs, a 15-fold increase in probableOS and SR, and a 9-fold increase in probable ES. Logistic regression analysis showed a significant association between category and time (p < 0.0005). CONCLUSIONS: The majority of research being conducted appears to be focused on OS or reviews of the literature. In contrast, probable RCTs and ES, which are arguably the most useful and rigorous forms of research, together consist of less than one third of the research being conducted. Furthermore, the increase in this research during the previous 30 years is lower than that of OS and SR. It is possible that the focus on SR reflects the growing recognition of the importance of this literature searching technique.

PHP47
ASSOCIATION BETWEEN HEALTH-RELATED QUALITY OF LIFE AND HEALTH SERVICE UTILIZATION AMONG PRIMARY CARE PATIENTS
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OBJECTIVES: We aim to investigate uncontrolled associations between HRQOL and health services utilization among primary care patients in mainland China. METHODS: A retrospective cross-sectional design was carried out among patients consulting in primary care in mainland China. Health services utilization was measured by the number of monthly outpatient consultation and the annual hospitalization rate. HRQOL was measured by either electronic or paper version of the Chinese SF-36. The clustered model was adopted to calculate the independent contributions from scores of the SF-36 subscales. A total of 733 valid subjects were eventually recruited for this study. RESULTS: The score of MH has a negative association with the number of monthly outpatient consultation and its independent contribution explained within the clustered model was 7.0%, whereas both the score of GH and PF have negative associations with the annual hospitalization rate and the independent contributions from GH and PF was a total of 22.2%. CONCLUSIONS: In summary, this was the first study verifying that scores of the SF-36 subscales have negative associations with outpatient and inpatient consultation among primary care patients in mainland China.

PHP48
THE EFFECTS OF NICE HTA’S ON PRESCRIPTION VOLUME, AVERAGE RETAIL PRICE AND AVERAGE OUT-OF-POCKET COSTS OF DRUGS DEEMED MEDICALLY NECESSARY FOR MEDICARE PART D REIMBURSEMENT IN THE UNITED STATES
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OBJECTIVES: As Medicare Part D results in de facto centralization of buying power in the US, we hypothesized that NICE HTA’s would increasingly influence the US market. The primary objective is to determine whether major findings of Health Technology Appraisals (HTAs) by the National Institute for Clinical Excellence (NICE; UK) impacted US trends in prescription volume, retail price and out-of-pocket costs of statins and of six therapeutic classes deemed medically necessary for Medicare beneficiaries. As a point of reference, we sought to investigate the same market factors in relation to the index date of Medicare Part D introduction. METHODS: The two most prescribable statins (atorvastatin, simvastatin), anticonvulsants (clonazepam, gabapentin), antidepressants (escitalopram, fluoxetine), oral antineoeploics (apcitabine, imatinib), antipsychotics (quetiapine, risperidone), immunosuppressants (azathioprine, mycophenolate), and antiretrovirals (emtricitabine/tenofovir, ritonavir) were selected based on total prescriptions (TRx), TRx, average retail price (ARP) and average out-of-pocket costs (OPC) per prescription were collected quarterly for 2005–2008. For six related HTAs conducted by NICE and the implementation of Medicare Part D, TRx, ARP and OPC were analyzed for the same number of quarters before and after the index event. Parameters were collected using Verisphere’s VONA and VOPA databases. Statistical analyses were performed using one-way ANOVA. RESULTS: From 2005 to 2008, 7 of the 14 drugs analyzed were directly or indirectly covered by a NICE HTA. Two HTAs were correlated with a significant increase in TRx,