processes and decisions. The health economics and health policy literature was reviewed for commentaries and case studies of particular decisions. Where decisions had been made by different bodies on the same technology those were reviewed for consistency. Parallels were drawn with methods of regulating market access in other European countries. RESULTS: NICE procedures were the most thorough but could not be applied early or to all technologies because of their resource-intensive nature. Methodological expectations for company submissions were similar between organisations, but the degree of independent review varied with the annual number of technologies assessed. In most cases, NICE and SMC decisions on the same drug were consistent. SMC most resembled equivalent systems in other European countries by evaluating drugs at launch. AWMSG was most concerned with budget impact. CONCLUSIONS: Most differences between the organisations could be explained by their differing objectives, scope of activities and timing of their intervention. The SMC was more concerned with timely and comprehensive coverage of all drugs, reflecting its closer links to NHS. NICE was only beginning to address implementation. Properly co-ordinated, the sequence of evaluations could follow a logical development of evidence quality over time, with minimal redundant work on company submissions. Without such co-ordination a waste of valuable time and resources is likely.

**PHP14**

**OPPS PHARMACY HANDLING COSTS: POLICY IMPLICATIONS**

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OBJECTIVE: The Medicare Prescription Drug, Improvement and Modernization Act (MMA) of 2003 directed the Medicare Payment Advisory Commission (MedPAC) to conduct a study of hospital pharmacy handling costs. The June 2005 MedPAC report recommended payment for handling costs of Part B specified outpatient drugs based on submitted charges, reduced to actual departmental cost and charge methods currently in use, analyses revealed a significant differential between methods reported by hospital respondents (including charge compression) and methods discussed in published CMS and MedPAC sources. CONCLUSIONS: Future payment rates for hospital pharmacy handling costs will likely be derived from hospital submitted charges, per the MedPAC recommendation. If the payment methodology does not take existing variations of recording pharmacy costs and charges into account, the resulting method will be significantly flawed and hospital providers may find they are underpaid for pharmacy handling costs in 2006.

**PHP15**

**THE CONSUMPTION OF DRUGS FINANCED BY THE SPANISH NATIONAL HEALTH SYSTEM AND THE IMPACT OF PHARMACOVIGILANT ACTIONS**

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OBJECTIVES: The Spanish Agency of Medicines and Health care Products (SAMHP) makes regulatory decisions concerning pharmacovigilance. Here, we analyse the impact of actions related to safety adopted by the SAMHP on drug consumption financed by the Spanish National Health System (NHS), over the period 1990–2004. METHODS: A retrospective analysis of the consumption was made, selecting drugs which were eventually withdrawn from the market. Consumption data was provided by the Ministry of Health and Consumer (MHC) database and expressed as number of prescriptions. Drugs selected were classified according to type of Adverse Drug Reaction (ADR), Anatomoc Therapeutic-Chemical Classification (ATC) and degree of therapeutic innovation at the moment of authorisation, according to the MHC. RESULTS: Fourteen drugs were selected for the purpose of this study, and none of these were categorised as “an exceptional therapeutic novelty”. The most common ADRs concerned severe liver (7/14) or heart (5/7) toxicity. At least 8 of the 14 drugs were associated with one safety action before being withdrawn. This was either a product labeling modification (astemizole, droxid, nimesulide, nefazodone, cerivastatine, trovafloxazine, and rofecoxib) or classification as hospitalary diagnostic (cisapride). Rofecoxib was the only one with two actions. A high level of consumption and in a very short time from authorisation until the first safety action (between one to three years) was found in nimesulide, cerivastatine and rofecoxib. In the rest of the drugs, the only action was the withdrawn. This happened after one year post-authorisation (tolcapone, sertindol, and grepafloxazine) or in the case of etrotdine, two years. CONCLUSIONS: The drugs withdrawn after one or two years from their authorisation would seem reasonable not have been financed by NHS. In all drugs, the first safety action resulted in a significant decrease in consumption. In some of these cases, manufacturers requested to SAMHP drug to be withdrawn.

**PHP16**

**ESTIMATING THE COST SAVINGS AND RATIONAL USE EFFECTS OF IMPLEMENTING AN ESSENTIAL MEDICINES LIST**

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OBJECTIVES: To determine the effects of implementing essential medicines list on rational use of medicines and medicine cost savings in the public sector of West Bank, Palestine. METHODS: The effect of EML on medicine expenditure was divided into two separate components: the effect of EML on quantities used, and the effect on medicine prices. The quantities of 76 medicine groups were used as the dependent variable with real GDP per capita, EML dummy, hospital dummy, time, and percent of insured population, as independent variables. Another set of regressions were defined with real medicine price per defined daily dose as dependent variable and real GDP per capita, EML, and percent insured as independent variables. A sample of prescriptions was also analyzed to measure the indices of rational medicine use. The indicators of rational use of medicines were assumed to be a function of EML, and 16 health center dummy
variables. RESULTS: Expenditures on medicines declined due to negative impact of EML on quantities of medicines utilized per capita as well as on real prices. The quantities declined on average by 1.7 DDDs per capita per year. The medicine price reduced on average by about US $0.0013 per defined daily dose. The real cost saved for the years 2000 to 2003 was about US $5.9 million. The EML was effective in shifting all prescribing indicators towards the standard values. CONCLUSIONS: The PMOH should allocate more resources for pharmaceutical budget in the future. The EML was successful in containing medicine cost, and careful review and update of EML should further increase the savings. The development and implementation of antibiotic medicine policy is an urgent need. Introduction of treatment protocols for the most common diseases, and continuous education on rational medicine use for medical staff is required.

**PHP17**

**EFFECTS OF GENERIC SUBSTITUTION ON THE DEVELOPMENT OF PHARMACEUTICAL EXPENDITURES DURING THE PERIOD JANUARY 1998 TO MAY 2005**

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OBJECTIVE: Mandatory generic substitution of prescribed drugs aiming to moderate the cost increase of pharmaceuticals within the pharmaceutical benefits scheme, PBS, was introduced in October 2002. The study aims to investigate if the introduction of generic substitution had an impact on the development of drugs costs in Sweden for prescribed drugs within PBS and in total. METHODS: Data on the sales of pharmaceuticals to each county council and to the country in total was obtained. Data comprised both total sales (prescriptions, hospitals sales and over the counter sales) and sales of prescribed drugs within the PBS was used for the period January 2000 to May 2005. Expenditure data was expressed as retail prices excluding VAT per 1000 inhabitants in Swedish krona (SEK). Interrupted time series analysis was used to investigate effects related to generic substitution. RESULTS: The county councils’ total cost for pharmaceuticals increased from 230 SEK/inhabitants in January 2000 to 280 SEK/inhabitant in May 2005. The county councils’ average monthly costs for PBS pharmaceuticals lay in three segments one had a constant cost of ~190 SEK/inhabitant over the study period, the second segment increased from ~140 SEK/inhabitant in 2000 to ~170 SEK/inhabitant in late 2002 where it stabilized and the third segment ~190 SEK/inhabitant in 2000 and increased to ~210 SEK/inhabitants in late 2002 and after that it was constant. Generic substitution was associated with reduced the slope of increase of costs for drugs within the PBS for the whole country and several of the county councils according to preliminary analyses. This was also seen for several of the county councils’ total costs immediately after the introduction of generic substitution. CONCLUSIONS: Preliminary analyses show that generic substitution had an impact in the pace of increase of pharmaceutical expenditures.

**PHP18**

**GEOGRAPHICAL INFORMATION SYSTEM (GIS) ANALYSIS OF SMALL AREA INEQUALITIES IN DRUG EXPENDITURES IN HUNGARY**

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OBJECTIVES: The aim of this study is to analyse the small area inequalities in the health insurance reimbursement of drugs in Hungary. METHODS: Data derives from the central database of the Hungarian National Health Insurance Fund Administration (OEP) covering the year 2003 and containing all the drug reimbursement information from the whole country. For the analysis we used three different kinds of drug expenditures according to the source of funding: health insurance reimbursement (paid by OEP), maximum reimbursement for socially handicapped (coming from state budget), co-payment of patients (paid out-of-pocket of patients) for subsidized drugs. The statistical analysis was carried out with SPSS version 12.01. Small areas refer to the postal code (zip code) districts of Hungary and the patients were assigned to small areas according to their permanent address. The Geographical Information system (GIS) analysis was carried out by the MapInfo Professional software version 7.5. RESULTS: The health insurance reimbursement of drugs paid by the National Health Insurance Fund Administration is significantly higher (p < 0.05) in the southern and eastern part of Hungary. The maximum reimbursement for socially handicapped paid by the National Health Insurance Fund Administration is also significantly higher (p < 0.05) in the eastern part of Hungary. The co-payment of patients is significantly higher (p < 0.05) in the western and central regions of Hungary. The results are presented on GIS maps also. CONCLUSIONS: The GIS analyses help to identify the geographical inequalities of the drug expenditures coming from different sources. In the more developed regions (western and central regions) the willingness and ability to pay the co-payment is higher. In the less developed regions of Hungary (northern and eastern regions) the people more rely on the reimbursement for socially handicapped financed from the state budget.

**PHP19**

**PRESCRIPTION DRUGS AND ANNUAL BENEFIT CAPS—DO PATIENTS ANTICIPATE EXCEEDING THE CAP?**

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OBJECTIVE: To investigate whether patients with a $1,000 annual prescription drug benefit cap reduced their drug consumption prior to exceeding the cap threshold. Previously, we found that the drug cap reduced overall drug consumption during the year. METHODS: Among the 183,640 subjects we had tiered copayments ($10 for generic & $15–35 for brand drugs), and were members of an integrated, prepaid delivery system: 146,050 subjects had an annual $1000 drug benefit limit; and 37,590 subjects had no benefit limit (because of supplementary insurance from former employers rather than individual choice). To compare drug consumption (measured in dollars) below the cap amount, we examined the risk of cap and non-cap subjects consuming $250, $500, $750, and $1000 in 2003 using proportional hazard models for each of these thresholds. We adjusted for age, gender, race/ethnicity, brand copayment amount, prior visits, socioeconomic status, comorbidity, and having a regular primary care provider. RESULTS: Among the 183,640 subjects, 16,657 (11%) of subjects with a cap and 7,888 (21%) of subjects without caps exceeded the $1,000 cap threshold during 2003. After adjustment for covariates, subjects with a cap were significantly less likely to exceed the $1,000 cap threshold (HR = 0.61, 95% CI: 0.56–0.66), compared with subjects without a cap. Similarly, subjects with a cap were significantly less likely to exceed lower drug consumption thresholds during the year, compared with...