0.001). For every 6 patients switching in cohort 1, 10 patients switched in cohort 2 (hazard ratio: 0.62, 95% CI: 0.57–0.69). The introduction of generic omeprazole resulted in decreasing expenditures for omeprazole (–€140 million; –56%) and for all PPIs (–€52 million; –16%) between 2001–2004. However, some savings have been missed due to increased switching from the generic product. Further results will be presented on statins of which analyses are currently conducted. **CONCLUSIONS:** After patent expiry, more patients switch from omeprazole to another PPI. It is however debatable whether a 5% increase in 'switchers' is relevant in the light of enormous decreased expenditures due to generic substitution.

PHP21

ANALYSIS OF COST OF ILLNESS IN THE NETHERLANDS IN 2003: INTEGRATING NATIONAL AND INTERNATIONAL PERSPECTIVES ON HEALTH CARE COSTS

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OBJECTIVES: To determine the demands on health care resources caused by disease, age and gender and to demonstrate the importance of the perspective on health expenditure (national versus international). **METHODS:** A generic top-down cost-of-illness analysis was performed for The Netherlands. Expenditure per provider in 2003 was known for three perspectives on health care costs: the OECD's System of Health Accounts (SHA) and two national perspectives. Data on health care use were collected from 70 registries of which the most important had national coverage. These were mapped on expenditure to estimate cost of illness and enabled analysis in six dimensions: provider, health care function, source of funding, age, gender and disease. Outcome measures were total costs and costs per capita. **RESULTS:** Mental diseases represent the most expensive main diagnostic group (22% of total costs). Heart diseases come second (9.2%). Neoplasms come on a 7th place (4.1%). The three perspectives showed minor differences in ranking of disease groups. Total costs differed widely between perspectives: €43.7 to €57.5 billion (9–12% GDP), the higher estimate based on the perspective of the Dutch National Health Accounts, the lower on the perspective of the Dutch ministry of Health. The international SHA-perspective came close in total costs to the ministry of Health estimate (€45.1 billion), but had a radical different composition. Cost increase by age, sharply from 65+ onwards until €50,000 per citizen for the oldest old. In the SHA-approach the increase is less steep because of the exclusion of specific health provisions for Dutch elderly. **CONCLUSIONS:** The perspective on health expenditure has an important influence on coi-estimates, especially for per capita costs and to a lesser extent for the relative expenditure on particular diseases. Insight in the differences between perspectives enables better national and international comparisons between coi-studies.

PHP22

NUTRICORE®: COST-EFFECTIVENESS-ANALYSIS (CE) OF AN EVIDENCE BASED CLINICAL NUTRITION CONCEPT IN CORRELATION WITH RELEVANT CLINICAL OUTCOMES IN HOSPITALIZED MALNOURISHED PATIENTS BY RISK-ADJUSTMENT OF DIAGNOSIS BASED SEVERITY OF DISEASE

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Current clinical data show that every third hospitalized patient in Germany is malnourished. This indicates a need for mandatory nutrition status screening and evidence based clinical nutrition. The cost-effectiveness-estimate of this concept has not yet been evaluated by a diagnosis based severity-of-disease risk-adjustment. NUTRICORE is the first study worldwide, using the predictive scale of Disease Staging to get valid data on risk-adjusted clinical and economic outcomes in the field of clinical nutrition research on large patient populations (>10,000). **OBJECTIVES:** To show a positive correlation of an evidence based clinical nutrition concept on clinical and economic outcomes in malnourished hospitalized patients by risk-adjustment on severity of disease and corresponding cost-effectiveness-analysis. **METHODS:** NUTRICORE SP1 is a prospective controlled interventional multicenter based clinical trial with more than 10,000 patients from German Hospitals. The nutrition status of each patient is screened and combined with clinical data, utilization data and direct costs on the basis of clinical homogenous patient clusters. The risk adjustment scales can be run by routine data sets from German inpatient G-DRG system 2006. In the control period starting in June 2006 the effects of usual nutrition care are documented. Starting the intervention period in October 2006 an implementation of an interdisciplinary evidence-based guideline for screening and clinical nutrition will be introduced in each participating hospital. **RESULTS:** NUTRICORE SP1 has been piloted in two 600-bed-hospitals in Germany during 2005, showing a significant reduction of costs for clinical nutrition by €152,544.00 per year for a risk-adjusted patient population of €38,004 cases in total. **CONCLUSIONS:** The study NUTRICORE SP1 is intended to show significant clinical improvements and significant cost-effectiveness by the implementation of an evidence based nutrition concept within clinical homogenous patient groups leading to reduction of Length of Stay (LOS), Inpatient Mortality, Complications-of-Care, hospital readmission.

PHP23

TIME SERIES ANALYSIS OF PHARMACEUTICAL PUBLIC EXPENDITURE: EVALUATION OF SUPPLY MEASURES

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OBJECTIVES: To analyze the evolution of the pharmaceutical public expenditure and to evaluate the impact of supply measures of restraint over its growth. **METHODS:** Time series analysis through linear autoregressive multivariate models (January 1999–June 2005). Source: monthly pharmaceutical invoices. Dependent variables: total public expenditure (E), number of prescriptions adjusted by days (P/d), and average public expenditure per prescription (E/P). Independent variables analyzed: trend, seasonal variation, cycles, number of days and lags when necessary. Impacts analyzed: introduction of maximum margins for wholesalers and chemists' and discounts over chemists' turnovers (D), and introduction of two reference pricing groups (RPG1 & RPG2 respectively). Lags are also introduced when residual autocorrelation occurs. Models are validated through normal contrast and no-correlation of residual. **RESULTS:** Adjusted R2 are 0.818, 0.684 and 0.814 in E, P/d and E/P when trend is considered as unique variable. There are no seasonal variation at any time series ($p > 0.1$) when this variable is related to four seasons as a categorical variable. However, August has been entered in E and P/d models as a dichotomic variable ($p < 0.0001$ & $p < 0.01$). Number of days also entered in E model ($p < 0.0001$). Annual cycle is observed in P/d and E/P model ($p < 0.05$) and half-yearly and cuatrimestral cycles also entered in P/d model ($p < 0.05$). Two supply measures present impacts at the short term. D has entered in the three models: E ($p < 0.001$; Beta: –8,733,966), P/d (Beta: –13,100) and E/P (Beta: –0.18) ($p < 0.05$ both). RPG2 has been also considered in E (Beta:

–4,339,412) and E/P (Beta: –0.16) ($p < 0.05$ both). Final adjusted R2: E: 0.937; P/d: 0.918; E/P: 0.906. **CONCLUSIONS:** trend is the most significant variable in the three models and when an impact is statistically significant, it seems not to present long-term sustainability because these supply measures have a short-term impact.

PHP24

THE COST OF ILLNESS: SPAIN 1980–2000

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OBJECTIVE: To distribute the total health spending in Spain for the years 1980–2000 among the seventeen ICD-9-CM categories. The study aimed to gather data for 1980, 1985, 1990, 1993, 1996, and 2000 in order to obtain a baseline from which to analyse the evolution of spending over time. **METHODS:** The method used was the top-down approach, starting with overall spending figures and, by means of various procedures, breaking them down to the desired level. The method comprised two stages. First, health spending was distributed according to the different types of health care: hospital care, primary care, drugs, and others. Second, the spending for each type of care was distributed among the ICD-9-CM categories. The base unit varied according to each level: admissions for hospital care, appointments for primary care, and consumption per therapeutic subgroup for drug treatment. **RESULTS:** In the period 1980–2000 health spending was concentrated into three ICD-9 categories: VII, VIII and IX (37.4% of spending in 1980 and 40.1% of spending in 2000). In terms of their relative rankings, category VII was second in 1980 (10.1%) but had moved into first place by the year 2000 (17.6%), showing one of the highest growth rates for the period. Category VIII (diseases of the respiratory system) was ranked first in 1980 (17.6%) but had fallen to second place by 2000 (13.2%). As regards the third category (IX: diseases of the digestive system) its relative position hardly varied: 9.7% in 1980 and 9.3% in 2000. The results also show that although the internal composition of each category (percentage of each type of health care) may vary widely, few important variations were observed between 1980 and 2000. **CONCLUSIONS:** The information provided may be of use to health managers and planners and it also establishes reference baselines for cost-of-illness studies of specific pathologies.

PHP25

EXPENDITURES ON DRUGS IN DEVELOPED EUROPEAN COUNTRIES

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OBJECTIVES: The article is transversal comparison expenditure analysis for drugs of 23 economicly developed european countries that are members of OECD. The data are related to year 2003, financial indicators are expressed in dollars. **METHODS:** Drug expenses are analysed in relation with those variables: GDP per 1 inhabitant, health care expenses per 1 inhabitant, number of physicians in praxis per 1000 inhabitants, proportion of inhabitants of the age 65 years or more. Among all the variables medium strong to strong relation was observed, determination index between drug expenditure per 1 inhabitant and actual number of active physicians and proportion of inhabitants of the age 65 years or more reached the value of 51%. **RESULTS:** Average drug expenditure per 1 inhabitant of the given year were 343 dollars, absolute average year growth in the years period 1995–2003, 19,4 dollars. Propotional expenditure average of health care from GDP reached in the year 2003 value of 8,32%, expenditure proportion on drugs from GDP was 1,37% from health care expenditure 16,9%. By cluster analysis significant relation between drug expenditure and number of general physicians and elderly inhabitants was determined. **CONCLUSION:** Lower drug expenditures have countries with lower economical efficiency, but also economicly developed European countries where systemic regulations are applied, directed towards main activators affecting the drug's consumption and price.

PHP26

SUPPLY SIDE COST-CONTAINMENT IN GERMANY: WIN SOME, LOSE SOME

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Until the late 1980s, the German health care machine worked well. Since then, it has been challenged the restructuring of the health care system of the former East Germany, economic downturn and changing demographics. **OBJECTIVES:** To analyze the reforms in financing and reimbursement in the German health care system over the past 15 years to guide health reforms elsewhere. **METHODS:** A policy and evaluation analysis was applied to the literature on health financing reforms in Germany to understand the contexts of the measures and their effects. To understand the impact of the policies, a scale was developed to assess the trajectory of the health care system as a result of the reforms based on the principles of solidarity and subsidiarity on which the German health care system was built. **RESULTS:** Classification of 12 reimbursement and financing measures indicates a shift away from the status quo from the solidarity-subsidiarity dyad towards either the solidarity-governmental interference or Eigenverantwortung (personal responsibility)-subsidiarity dyad. Unfortunately, despite their collective potential of far-reaching impact and long-term success, deficit in operating mechanism(s) and inconsistencies have hindered the supply-side cost-containment measures of the past 15 years. **CONCLUSION:** Just as a change in the environment requires new tools to address challenges faced by the system, so does the approach to instituting reforms call for rethinking. While in the politics of health policy evolutionary reforms may make more sense than radical reforms, beyond evolutionary reforms which have produced only modest results the sustainability of the financing of the system calls for radical reforms.

PHP27

THE ANALYSIS OF TEMPORARY WORK DISABILITY FOR THE PERIOD OF OVER 30 DAYS IN THE REPUBLIC OF SERBIA

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OBJECTIVES: Analysis of utilization of the right to sick leaves of the beneficiaries of the Republic Health Insurance Institute(RHII) in the period from January to September 2005, lasting more that 30 days, analysis of the reasons for sick leaves and suggested measures for more efficient control over the rights to benefits, upgrading of utilization and guaranteeing the rights, providing equal rights to all beneficiaries,and abuse reduction. **METHODS:** Statistic data processing by uniform statistic forms containing data on all medical commissions, classification of groups of deseases according to the ICD-10. **RESULTS:** The total number of beneficiaries with temporary work disability was 263,825, 50,316 were enabled, 213,509 were given extensions and 28,387 beneficiaries were sent to DMC. The most common reasons for sick leaves were: vascular deseases 12.73%, bones, joints & muscles system 11.36%, mental and behaviour disorders 10.85%, injuries—distorsions and fractures 9.05%, tumors