**PHP75**

**WHETHER THE TREATMENT EXPENDITURES OR THE PHARMACEUTICAL EXPENDITURES OF SOCIAL SECURITY INSTITUTION (SSI) HAVE A HIGHER INCREASE RATE BETWEEN 2005 AND 2011 IN TURKEY?

Tuna E, Dogan C, Dede T, Ozel MO, Pumpl F, Yilmaz ZS

Bayer Turk Kimya San. Ltd. St., Istanbul, Turkey

**OBJECTIVES:** Turkey has accomplished remarkable improvements in terms of health status particularly after the implementation of the Health Transformation Program (HTP). Applied to each of the public health insurance, the number of hospital visits and also the number of physician consultation per capita has increased and disparities of benefit package between different risk factors have been unified. As a result total health care expenditures have increased at a large extent. The aim of this study is to evaluate the rates of increases in the expenditures of Social Security Institution (SSI) in terms of pharmaceutical and treatment expenditures between 2005 and 2011.

**METHODS:** Databases of SSI, MHS, Ministry of Health and AITF have been searched for the period of 2005 to 2011. Rates of increase in the health expenditures, number of people covered by public health insurance, hospital visits and the number of physician consultation per capita have been evaluated and compared.

**RESULTS:** Between 2005 and 2011, coverage of public health insurance has risen from 89 to 96, physician consultation per capita has increased 63.8%, total health expenditures of SSI have increased 18% with a 23% increase in treatment expenditures and 12% increase in pharmaceutical expenditures.

**CONCLUSIONS:** As a result of increase in the coverage of public health insurance and the number of hospital visits, treatment expenditures have risen at a large extent. But on the other hand, pharmaceutical expenditures’ increase rate was not at the same level. The main reasons are the global budget policy and the increases at the mandatory institutional discounts, which are being used as a major cost containment tool. Despite the access to the containment of pharmaceutical expenditures, any major cost containment policy for treatment expenditures haven’t been implicated, and in addition treatment expenditures are continuing to rise.

**PHP76**

**SURFING THE GERMAN BENEFIT ASSESSMENT WAVE**

Drescher S

Double Helix Consulting, London, UK

**OBJECTIVES:** The German Pharmaceutical Market Restructuring Act (AMNOG) was implemented January 2011 and heralded as one of the most important European health care reforms to impact the pharmaceutical industry. Two years into its implementation the industry is still adapting and learning to navigate the new process effectively. This research assessed the impact of the AMNOG reform since January 2011 to inform new product development and launch strategies.

**METHODS:** To identify the criteria for successful benefit assessment outcomes and their relative importance in justifying price premiums, the benefit assessment dossiers submitted to-date were analysed in a systematic approach. Findings were corroborated through in-depth interviews with national level stakeholders.

**RESULTS:** As of January 2013, 29 products have been launched in Germany since the AMNOG reform: five achieved a considerable additional benefit, ten received a minor additional benefit and three received an unclassifiable additional benefit. However, almost half of the products submitted for benefit assessment were not granted any additional benefit, indicating that two years after the implementation of the AMNOG reform, manufacturers are still uncertain as to what is acceptable medical benefit for successful benefit assessment outcome point to the importance of building a dialogue with the G-BA before dossier submission and understanding the G-BA’s criteria for comparison selection. They also highlight the increasing importance of opting for a clinical development, acceptable ‘priority for access’ of an AMNOG’s benefit assessment methodology, amenable to robust comparative studies with the chosen comparator and long-term data collection.

**CONCLUSIONS:** The new German HTA process is still an evolving process and it is important to the pharmaceutical companies to complete benefit assessments and price negotiations. This understanding will help secure successful outcomes for products currently in development and patient access to novel therapies, not only in Germany, but also in compared to medical expenditures, making improvements to prediction more difficult for medical models. Incorporating the MM into Medicare Part D risk-adjustment models (CMS-RxHCC) would improve risk-adjusted capitated payments from both the perspectives of CMS and the health plans and mitigate adverse risk selection.

**PHP77**

**DOES CONTINUITY OF CARE MATTER?**

Birmingham S, Chambers A, Khaln MD

Toronto Health Economics and Assessment (THETA) Collaborative, Toronto, ON, Canada, ‘Health Quality Ontario, Toronto, ON, Canada

**OBJECTIVES:** Relational continuity of care (COC) refers to the quality and duration of the relationship between a patient and provider. We aimed to determine whether increased COC results in improved health utilization in patients with chronic conditions. **METHODS:** We searched MEDLINE, EMBASE, CINAHL and the Cochrane Library from 2002 to December 2011 for general practice and non-ACO studies comparing outcomes in patients with high, medium and low COC. Chronic disease cohorts were constructed using administrative databases from Ontario, Canada. Resource use and costs for each condition were calculated over five years and utility values were identified in the literature; economic analyses were costed in Canadian dollars and QALY gain of improving continuity was explored in a sensitivity analysis. **RESULTS:** Thirteen observational studies were included in the systematic review. All assessed continuity using administrative data to measure visits to primary care providers. Results were not pooled due to variability in COC indices and patient populations. However, across all cohorts patients with high COC had significantly fewer hospitalizations and emergency department visits compared to people with low and medium continuity. As a result, people with high continuity incurred fewer health care costs compared to those with lower continuity. It is likely that interventions designed to improve COC would represent value for money, even if only marginally effective.

**CONCLUSIONS:** These initiatives could take the form of policy decisions governing the financing and delivery of health care in the community. Such champions have far-reaching consequences for patients and providers throughout the system, more research in this area is needed. The literature was limited by an absence of evidence in family health teams and among providers who are not physicians.

**PHP78**

**DETERMINANTS OF PHYSICIAN PRACTICE STYLES**

Wang H, Karaca Z

Agency for Healthcare Research and Quality (AHRQ), Rockville, MD, USA

**OBJECTIVES:** This study identifies factors that influence physicians’ use of medical resources. **METHODS:** We used the Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases (SID), the American Hospital Association Annual Survey Database, and the Area Resource File in this analysis. Our hospital data for 2008 were drawn from Arizona and Florida, and physician information was obtained from medical boards of each state where we used physicians’ license numbers to register each hospital inpatient visit to a physician. Over 2.5 million inpatient records were used in the analysis. We employed linear cost models using all hospital inpatient stays registered to physicians for whom we had information on observable characteristics. We also estimated multilevel regression models that clustered hospital inpatient visits across physicians. We then repeated our linear regression analysis focusing separately on physicians working only in either teaching or non-teaching hospitals to address possible endogeneity of patient case mix and unobservables in physician-specific factors that may not be completely addressed via regression models. Finally, we re-estimated our multilevel model using all hospital inpatient stays registered to physicians for whom we had information on observable characteristics. We also estimated multilevel regression models that clustered hospital inpatient visits across physicians. We then repeated our linear regression analysis focusing separately on physicians working only in either teaching or non-teaching hospitals to address possible endogeneity of patient case mix and unobservables in physician-specific factors that may not be completely addressed via regression models. Finally, we re-estimated our multilevel model using all hospital inpatient stays registered to physicians for whom we had information on observable characteristics. We also estimated multilevel regression models that clustered hospital inpatient visits across physicians. We then repeated our linear regression analysis focusing separately on physicians working only in either teaching or non-teaching hospitals to address possible endogeneity of patient case mix and unobservables in physician-specific factors that may not be completely addressed via regression models. Finally, we re-estimated our multilevel model using all hospital inpatient stays registered to physicians for whom we had information on observable characteristics. We also estimated multilevel regression models that clustered hospital inpatient visits across physicians. We then repeated our linear regression analysis focusing separately on physicians working only in either teaching or non-teaching hospitals to address possible endogeneity of patient case mix and unobservables in physician-specific factors that may not be completely addressed via regression models. Finally, we re-estimated our multilevel model using all hospital inpatient stays registered to physicians for whom we had information on observable characteristics. We also estimated multilevel regression models that clustered hospital inpatient visits across physicians. We then repeated our linear regression analysis focusing separately on physicians working only in either teaching or non-teaching hospitals to address possible endogeneity of patient case mix and unobservables in physician-specific factors that may not be completely addressed via regression models. Finally, we re-estimated our multilevel model using all hospital inpatient stays registered to physicians for whom we had information on observable characteristics. **RESULTS:** Our key findings remained the same across all estimations: 1) the costs of hospital inpatient stays registered to female physicians or foreign-trained physicians are significantly lower than the costs of hospital stays registered to male physicians or U.S-trained physicians; 2) the costs of hospital stays registered to physicians with more experience is lower when compared to physicians with less experience, and 3) there is substantial variation in costs of hospital inpatient stays across board certified physician specialties, where surgeons and cardiologists are generally associated with higher costs of hospital inpatient stays. **CONCLUSIONS:** Our findings demonstrate that physicians’ characteristics have a significant impact on the costs of hospital inpatient stays.

**PHP79**

**DID MEDICAL LITIGATION AGAINST PHYSICIANS INCREASE INPATIENT Hospital COST?**

Wang H, Karaca Z

Agency for Healthcare Research and Quality (AHRQ), Rockville, MD, USA

**OBJECTIVES:** This study empirically investigates “medical litigations” against physicians, assess its impact on hospital inpatient costs registered to physicians facing medical litigations and the spillover effects on other physician colleagues. **METHODS:** We employ generalized linear models to estimate the impact of medical litigation against an individual physician on hospital inpatient costs. We also estimate the spillover effects of the medical litigation against an individual physician on the costs of hospital inpatient stays registered to physicians with no medical lawsuits associated with them working within the same hospitals for each of the following board certified physician specialties: Cardiologists, general practitioners, neurologists, obstetricians and/or gynecologists, pediatricians, psychologists, surgeons, and urologists. We use the Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases (SID), the American Hospital Association Annual Survey Database, and the Area Resource File in this analysis. Our hospital data for 2008 are drawn from Florida, and physician information was obtained from the state’s medical board where we use physicians’ license numbers to register each hospital inpatient visit to a
physician. Over 1.7 million inpatient records are used in the analysis. RESULTS: Our risk-adjusted results show that medical litigation against physicians increases the risk of average length of stay (LOS) of inpatient hospital visits about 11%. We find that hospital inpatient costs registered to surgeons with no medical litigation history are higher (about 28%) at hospitals where there is at least one surgeon facing hospital inpatient costs registered to surgeons with no medical litigation history. We find that the impact of spillover on life satisfaction was estimated using a stepwise multiple linear regression model, considering age and gender as confounders. RESULTS: Multimorbidity and income were moderately but significantly correlated with general life satisfaction (linear regression beta-coefficients: beta=0.26 resp. 0.25; p<0.01). Correlations with the outcome categories satisfaction with work, social contacts, income and health were also positive (beta coefficients between 0.15 and 0.40; all p<0.01). All effects were independent of age and gender. As expected, disease status had the greatest influence on satisfaction with health (beta=0.40) but also on satisfaction with work and functional capacity (beta=0.25). CONCLUSIONS: The results demonstrate specific, independent but complementary impacts of health status on life satisfaction and its domains. The impact on societal resource allocation decisions is being discussed: Optimal population based life satisfaction might require combining health care and economic improvements.

**PHP80**

**IMPACT OF MULTIPLE CHRONIC DISEASES AND FINANCIAL STATUS ON LIFE SATISFACTION**

Pfotthai P1, Eichmann P2, Guether B2

1Kantar Health GmbH, München, Germany, 2Kantar Health Germany, Munich, Germany

OBJECTIVES: The influence of financial status on life satisfaction is well discussed among economists. In contrast, population surveys indicate that general health is viewed by most subjects as key contributor to life satisfaction. We therefore aimed at analyzing the reciprocal impacts of morbidity and economic status on life satisfaction as a health outcome variable. METHODS: In 2007, two representative adult samples of the Kantar Health European Healthcare Panel in Germany and UK were surveyed (n=72,605) and self-reports on 22 chronic diseases (12-month-prevalences summed up to a multimorbidity score) and household income (net household income in GBP) were collected. In 2012, a sample of 4,008 individuals was re-contacted and participants completed a health status and a validated life satisfaction questionnaire (IZA LSQ) with five domains: Life as a whole, work, social contacts, income and health (Kaprio et al. 2007). The prevalence of multimorbidity and income on life satisfaction was assessed using a stepwise multiple regression model, considering age and gender as confounders. RESULTS: Multimorbidity and income were moderately but significantly correlated with general life satisfaction (linear regression beta-coefficients: beta=0.26 resp. 0.25; p<0.01). Correlations with the outcome categories satisfaction with work, social contacts, income and health were also positive (beta coefficients between 0.15 and 0.40; all p<0.01). All effects were independent of age and gender. As expected, disease status had the greatest influence on satisfaction with health (beta=0.40) but also on satisfaction with work and functional capacity (beta=0.25). CONCLUSIONS: The results demonstrate specific, independent but complementary impacts of health status on life satisfaction and its domains. The impact on societal resource allocation decisions is being discussed: Optimal population based life satisfaction might require combining health care and economic improvements.

**PHP81**

**VARIABILITY IN LOCAL UPTAKE AND PATIENT ACCESS TO MEDICINES - IMPLEMENTATION OF SCOTTISH MEDICINES CONSEQUENCE GUIDELINES**

White B1, Mallinson M4


OBJECTIVES: Our objective is to determine how drivers behind a health system’s health service reforms has been to reduce regional and local variability of access to care and medicines. However, the devolved countries in the UK also have individual challenges - recently the Scottish Health Secretary, Alex Neil, said a review of the Scottish Medicines Consequences (SMC) guidance was launched in response to “concerns about variable access to medicines” raised by some clinicians, charities and patients. This study interviewed NHS leaders in Scotland to understand the reasons behind this variability and use of SMC guidance. METHODS: Secondary research to understand NHS drivers & local decision-making processes followed by 1:1 stakeholder interviews with 12 NHS Senior payers across Scotland. RESULTS: Scotland’s NHS is renowned as being at the forefront of new technologies and innovation. Uptake of guidance, like that of NICE is mandated, however, Health Boards (HBS) are facing many challenges to balance the national quality agenda with a need to make tough efficiency savings to ensure HBS continue to deliver for their local population. Whilst national groups such as NICE and SMC are seen as leaders within the HTA space, it would appear that a huge challenge within countries adopting these HTA recommendations and guidance will continue to be equitable implementation across the country, however this will now be greatly influenced by new decisions on an increasingly centralized picture in Italy and Spain. CONCLUSIONS: The implementation of SMC guidance was seen as a national driver by Scottish Health Boards (HBS). Implementation decisions are taken at a HB level and a key driver influencing implementation is now local affordability and infrastructure capacity, of interest for many payers is the challenge of medicines optimization.

**PHP82**

**COMPLETE DRUG INFORMATION, A KEY FOR SAFE THERAPY: A COMPARATIVE EVALUATION OF DRUG BROCHURES USED FOR DISSEMINATING DRUG INFORMATION BY PHARMACEUTICAL COMPANIES IN PAKISTAN AND MALAYSIA**

Masood I1, Ibrahim M2, Hassali MA3, Ahmad M4, Shafie AA5, Saleem F5, Masood M6

1The Islamia University of Bahawalpur, Bahawalpur, Pakistan, 2College of Pharmacy, Qatar University, Doha, Qatar, 3University of Western Sydney, Penang, Malaysia, 4UNIVERSITY SAINTS MALAYSIA, PENANG, Malaysia, 5The University of Veterinary and Animal Sciences, Lahore, Pakistan

OBJECTIVES: To evaluate the consistency of information given in drug brochures by pharmaceutical companies. METHODS: Total of 500 drug brochures were collected from the doctors’ clinics in Pakistan and 473 brochures were collected from the general practitioners’ clinics in Malaysia. After comprehensive scrutiny, 244 and 233 brochures were finally included and evaluated for the study. An evaluation form was developed based on the criteria given by WHO, FIPMA, DCMOH(Pakistan) and PhAMA. The data was analyzed using SPSS. To summarize the data, descriptive statistics (frequencies, percentiles) were calculated. The Chi-square test was used to test association between categorical variables. A P value of less than 0.05 was considered as statistical significance for all the tests. RESULTS: The Cronbach’s coefficient Alpha value was 0.729 (p<0.001). Preparations that were clearly explained as to the intended use of the brochures, the side effects of the drugs, the contraindications, precautions and the dosage were found to be the highest among the different criteria. The brochures were found to be comprehensible in terms of presenting contraindications and warnings. CONCLUSIONS: The drug information given in the brochures, discrepancies are evident mainly in drug safety related information like side effects, possible ADRs, precautions etc. The references cited in the brochures were also found to be inappropriate and incomplete.

**PHP83**

**THE IMPACT OF PRE-EXISTING COMORBIDITIES ON FAILURE TO RESCUE OUTCOMES IN TRAUMA PATIENTS**

Zarrour R1,2

1University of TN Health Science Center, Memphis, TN, USA

OBJECTIVES: Death after complication, or “Failure to Rescue” (FTR), contributes to differences in risk-adjusted mortality rates among trauma centers and is considered an indicator of quality of care. The objective of our study was to assess the effect of specific comorbidities on FTR outcomes in trauma patients. METHODS: We performed a retrospective cohort study that analyzed patient records included in the National Trauma Data Bank (NTDB) from years 2006-2010. The dataset was limited to patients with an injury severity greater than 9 and who were between the ages of 18 and 64. Only patients treated at hospitals with adequate complication reporting were included in the analysis. Cox regression was used to determine the independent contribution of individual comorbidities to FTR outcomes while controlling for injury severity, head injury, mechanism of injury, hypotension, age, gender, race, and insurance type. RESULTS: Diabetes, congestive heart failure, history of myocardial infarction, and dialysis were associated with greater hazard ratios for FTR [HR 1.18 (CI 1.05, 1.32), 1.45 (1.16, 1.81), 1.30 (1.01, 1.67), 2.02 (1.50, 2.72), respectively]. Obesity and hypertension were not with associated increased risk of FTR. CONCLUSIONS: Pre-existing comorbidities contributed significantly to risk of death after complication in the trauma population. Identifying processes of care that lead to better management of complications in trauma centers would improve trauma centers' overall mortality outcomes.

**PHP84**

**NATIONAL SURVEY FOR PHARMACISTS ON PATIENT SAFETY CULTURE IN JAPAN**

Hiruse M1, Tsuda Y2, Fukuda H3, Imanaka Y4

1Okayama University Hospital, Izumo, Japan, 2St. Mary’s Hospital, Kurume, Japan, 3Institute for Healthcare Improvement, and Policy, Tokyo, Japan, 4Kyoto University, Kyoto, Japan

OBJECTIVES: This study aims to explore safety culture dimensions among health care professionals using AHRQ (Agency for Healthcare Research and Quality)’s survey questionnaire(Hospital Survey of patient Safety Culture: HSOPSC). METHODS: We surveyed nationwide the situation of patient safety culture in 13 hospitals allowed for additional costs on patient safety measures under the social insurance medical fee schedule. The questionnaire consists of seven unit-level aspects of safety culture including 24 items, three hospital-level including 24 items, and four outcome variables including nine items. RESULTS: An average number of beds was 360 beds (63 to 1,354 beds). With regard to ownership, 13 hospitals included three universities and local incorporated agency hospitals, one public hospital, two judicial person with social insurance hospitals, six medical corporation hospitals, and one other hospital. Number of all respondents was 5,118 persons (response rate: 88.8%), and included 295 physicians (90.8%), 2,909 nurses (95.5%), and 146 pharmacists (96.7%). In terms of dimensions, the overall average positive response rate (RR) for the 12 patient safety dimensions of the HSOPSC was 49.2%, extremely lower than the average positive response in the AHRQ data (67.1%). In terms of hospitals, the overall average positive RR for physicians (46.2%) was lower than that for nurses (49.6%) and 49.4%. With regard to pharmacists, the average positive RR for the 12 patient safety dimensions was 48.6% among three professionals, and three average positive RRs were the highest, Frequency of event reporting (pharmacists: nurses=73.6%:53.3%:67.9%), Non-punitive response to error (48.8%:62.4%:60.4%), and Support from leadership (48.8%:62.4%:60.4%) provided the evidence for assessment of patient safety culture in Japan’s hospitals. This result that patient safety culture has been in a state of development, compared with Western hospitals. And, pharmacists have to take a considerable interest patient safety in Japan.