approached on a one-to-one basis and were requested to participate in the study. A previously validated survey instrument that measured awareness, attitude and behavior towards the wait and watch approach was used. Data were coded and analyzed using SAS 9.18 to perform descriptive statistics and stepwise multivariate linear regression.

RESULTS: A total of 89 completed surveys were collected with a response rate of 22.2%. Majority of the respondents were pediatricians (75%), while 19.3% were family practitioners. About 44% of the physicians were aware and familiar with the wait and watch approach recommendation from the AAP guideline. In general, physicians had a positive attitude towards the wait and watch approach (3.99 ± 0.76). Physicians in this sample reported that they sometimes used the wait and watch approach in patients ≥2 years (2.83 ± 0.86). Awareness (β = 0.256) and attitude (β = 0.32) were found to be significantly associated with behavior (p < 0.05) when controlled for demographic and decision-making factors in the multivariate regression model. CONCLUSIONS: Awareness regarding the wait and watch approach leads to positive attitude that ultimately leads to behavior to use the wait and watch approach. Increased use of this approach may reduce antibiotic costs and resistance issues substantially. Further research on a national sample is needed to validate the study results.

POSTER SESSION II

HEALTH CARE USE & POLICY STUDIES – Consumer Role in Health Care

PHP2 PHARMACY BENEFIT DESIGN AND PATIENT DRUG SUBSTITUTION

Shang B1,2,3

1The George Washington University, Washington, DC, USA

OBJECTIVES: This paper 3 examines the extent of drug substitution, for example, from brand-name drugs to generics and from retail to mail order to mail order; 2) simulates the cost savings associated with drug substitution; and 3) estimates the effects of various factors on drug substitution, including patient characteristics, cost sharing and generic entry. METHODS: We use pharmacy claims data from three employers for working-aged adults and their dependents from 1998 to 2004. We focus on five major therapeutic classes and track the share of total days supplied of each therapeutic class in six countries: generic and retail, multi-source brand and retail, single-source brand and retail, generic and mail order, multi-source brand and mail order, single-source brand and mail order. The shares are compared by drug plan over time and we simulate the cost savings (both total costs and OOP costs) by assuming these shares are fixed at the 1998 level through the rest of the study period. RESULTS: Per capita drug spending increased by 12% and 2% lower, respectively, for each plan in 2003 than in 2002. Additionally, we have had no substitution occurred since 1998. We find substantial variation in substitution by therapeutic class, by drug plan and over time. Plan 1 realized the most savings from Histamine (H2) Antagonist (183% for Plan 1, 11% for Plan 2 and 45% for Plan 3) while Plan 2 realized the most savings from Cardio, ACE Inhibitors (56% for Plan 1, 76% for Plan 2 and 23% for Plan 3). Savings on OOP costs vary as well.

CONCLUSIONS: Drug substitution could result in substantial savings. To more effectively promote drug substitution, certain policy steps need to be taken to address factors other than cost sharing, such as physician prescribing behaviors.

PHP3 HEALTH CARE PATTERNS AND PATIENT SATISFACTION IN EUROPEAN COMPANION OF SIX COUNTRIES

Nargiz S1, Pothoff P2, Guehrer B3

1TNS Healthcare, New York, NY, USA; 2TNS Healthcare, Munich, Bavaria, Germany

OBJECTIVES: To assess health care patterns and patient satisfaction with health care systems among European nations. METHODS: TNS European Healthcare Survey of individuals in France, Germany, Italy, Spain, UK and the Netherlands were surveyed in 2007 to assess health care patterns and disease burden at national level. The data is representative of population gender and age in respective countries, ensured by sampling and intensive panel management. The survey collected information on health conditions, quality of life, health care utilization and satisfaction with health care system. RESULTS: Approximately 175,000 individuals completed the survey, with equal male/female representation. Pain(>83.3%), Allergy(>53.10%), Migraine(>18.400), Sleepyng problems(>35.900), Skin disease(>35.800), Gastronnematosis disease(>35.000), Depression(>30.200), High blood pressure(>22.800), Urinary problems(>20.800) and High cholesterol(>19.200) were the top 10 reported ailments. Across the countries, 49.9% self diagnosed a health condition (range: 37.5%(Netherlands) to 59.1%(Germany)), whereas 33.3% (range: 8.4%(UK) to 19.1%(Netherlands)) and 19.4% (range: 8.8%(UK) to 24.7%(Germany)) reported Primary Care Physician and Specialist as primary source of diagnosis. Correspondingly, 34.3% (range: 20.1%(Spain) to 59.0%(UK)) reported self medication, while 26.3% (range: 20.7%(Italy) to 34.1%(France)) were 28.8% (range: 8.1%(UK) to 41.2%(France)) (26.8% (range: 13.8%(Netherlands) to 11.6%(US)) reported being treated by Primary Care Physician or Specialist/Hospital Clinic respectively. Overall, 71.6% (range: 57.6%(UK) to 82.4%(France)), 36.0% (range: 23.6%(Spain) to 58.5%(UK)), 12.9% (range: 3.7%(Netherlands) to 17.7%(France)), 5.4% (range: 2.8%(Netherlands) to 7.5%(UK)) and 7.7%(UK) to 12.3%(Italy) were treated with prescription medications, OTC, plant-based pharmaceuticals, alternative-therapeutic-options and other products respectively. Satisfaction with health care system varied dramatically: 49% very satisfied/satisfied (range: 26%(France) to 66%(US)); 17% Neutral (range: 7%(France/Netherlands) to 27%(Italy)) and 34% somewhat/very dissatisfied (range: 27%(France) to 47%(Italy)). CONCLUSIONS: Patient satisfaction with health care system appears to be low and reports of self-diagnosis and self-medication are high in the countries. This highlights the increasing importance of patient involvement in health care and treatment and need for integrating patients into health care processes in various forms to alleviate health care burden (clinical/economic/humanistic) in respective geographies.

HEALTH CARE USE & POLICY STUDIES – Diagnosis Related Group

PHP4 CHANGES OF THE CASE-MIX INDEX OF THE HUNGARIAN INTENSIVE CARE UNITS

Varga S1, Bogár L2, Lešteny A3, Vas G4, Ágoston I1, Kriszracher B1, Foncsó I1

1University of Pécs, Pécs, Hungary; 2National Health Insurance Fund Administration, Budapest, Hungary; 3University of Pécs, Pécs, Hungary.

OBJECTIVES: Diagnosis-related Group (DRG) classification as a normative health financing system, has been used by the National Health Insurance Fund Administration (NHIFIA) in Hungary since 1993. In the intensive care in our DRG system it can frequently occur that real cost exceed the reimbursement. In the view of the intensive care, the case mix index (CMI) correlate the reimbursement. A 10 years run of the CMI was analyzed comparing the global mean CMI of all recognized specialties to the mean CMI of the intensive therapy. METHODS: Using the data of the NHIFIA between 1995 and 2005, the CMI of the intensive therapy treatment was compared to the mean CMI of all recognized medical specialties. RESULTS: The case-mix index of intensive care units increased from 1.69 in 1995 to 4.79 in 2005, while the average case-mix index of all medical specialties increased moderately from 1.08 in 1995 to 1.11 in 2005. In the first two years, in 1995 and in 1996, the CMI of the intensive therapy was 56% more than the global mean. But in 1997, a sudden great increase happened to 163% and after that to 197% in 1998 and finally to 250% in 1999. From the year 2000, the rise of CMI was between 1.5% and 22.8% from year to year increasing to 33.3%. During these 10 years, the changing of the global mean CMI of all specialties was only 2.5%. CONCLUSIONS: In Hungary between 1995 and 2005, while the CMI of all recognized specialties increased only 2.5%, the biggest change happened in the intensive specialty. The CMI increased from 1.6 to 4.8 weight-number which means a 300% rise. During this time, the reimbursement of one weight-number runs high too.

PHP5 MARKET SHARE OF INTENSIVE CARE UNITS IN HUNGARY ACCORDING TO THE DRG SYSTEM

Varga S1, Bogár L2, Lešteny A3, Nagy Z2, Ágoston I1, Kriszracher B1, Foncsó I1

1University of Pécs, Pécs, Hungary; 2National Health Insurance Fund Administration, Budapest, Hungary, 3Health Insurance Supervisory Authority Budapest, Hungary.

OBJECTIVES: The reimbursement of one patient therapy is always disputed as it is questioned the exactness of the cost calculation. The goal of our analysis was to define the change of market share in the reimbursement compared to the change in amount of patients in intensive therapy period from 1995 to 2005. RESULTS: In the intensive therapy, the patient number rate of all in patient care was 0.75% in 1995. During four years, it increased slowly. In 1998 it was 0.87%. In 1999 a sudden increase happened, the rate reached 1.33%, and after that it consistently went up to 1.67% in the last 5 years. Comparing 2005 to 1995, the total rise was 123% in number of patients treated in intensive care units. Using the DRG weight-number as a base value for financing the market share, the reimbursement of the intensive therapy was 1.2-1.3% in 1995–1996, and after that increased to 2.2-2.6% in 1997–1998 and to 4.6% in 1999. From 2000 to 2005 the increase was gradual but progressive. In 2005 the market share of the intensive therapy was 7.2%, which (6.2 times more then in 1995). The total change was 51%.

CONCLUSIONS: While the number of the treated patients increased 123%, the rise of the reimbursement was 51%. So the financing of the intensive therapy changed positively between 1995 and 2005 in Hungary.

HEALTH CARE USE & POLICY STUDIES – Drug/Device/Diagnostic Use & Policy

PHP6 PHYSICIAN KNOWLEDGE OF THE FDA-APPROVED INDICATIONS OF COMMONLY PRESCRIBED DRUGS: RESULTS OF A NATIONAL SURVEY

Molony R1, Chen D2, Wynia MK1, Alexander G1

1University of Chicago, Chicago, IL, USA; 2University of Virginia, Charlottesville, VA, USA

OBJECTIVES: The Food and Drug Administration (FDA) regulates prescription drug marketing, not prescribing, and medication use for non-FDA approved indications (“off-label use”) is common. However, many off-label uses lack supporting evidence and may expose patients to unwarranted risk. We sought to determine physicians’
Abstracts

THE IMPACT OF LEGISLATION AND PRICING ON GENERIC DRUG UTILIZATION: AN ANALYSIS OF 26 COUNTRIES
Harvard School of Public Health, Boston, MA, USA
OBJECTIVES: Across countries with varying political, socioeconomic and cultural environments, we sought to identify predictors of generic drug utilization. METHODS: Data were collected from national and international regulatory agencies, MEDLINE and internet searches for 37 countries classified as “advanced” or “emerging” economies by the International Monetary Fund: Argentina, Australia, Austria, Belgium, Brazil, Canada, China, Cyprus, Denmark, Finland, France, Germany, Greece, Iceland, India, Israel, Italy, Japan, Luxembourg, Malta, Mexico, Netherlands, New Zealand, Norway, Portugal, Russia, San Marino, Singapore, Slovenia, South Korea, Spain, Sweden, Switzerland, Taiwan, UK. We compared the presence of generic policies, first year of generic legislation, branded drug patent duration, proportion of generic drug utilization, and pricing for generics (government control, free market, or other), gross domestic product, and population across countries. Only independent variables with p < 0.20 in univariate regression were included in the multivariate model: population, year of generic legislation, patent life, and pricing for generics (market vs. government control). RESULTS: Of 37 countries, data was available for 26 (70%): Argentina, Australia, Austria, Brazil, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Italy, Japan, Mexico, Netherlands, New Zealand, Norway, Portugal, Russia, Singapore, Slovenia, South Korea, Spain, Sweden, Switzerland, and United States. Most countries enacted generic drug legislation in the 1990s, 9 (33%) introduced legislation before 1990, and 3 (12%) after 2000. Branded drug patent duration was 15–20 years for 65% of countries. Among countries with generic drug laws, only free-market based generic pricing, compared to government-controlled pricing, was associated with a marked increase in generic drug utilization (B = 0.17, p < 0.001, 0.035. CONCLUSIONS: Countries with minimal generic drug utilization across countries. Further investigation of other characteristics, the political and social climates that foster greater generic drug utilization is planned.

CHARACTERISTICS OF MEDICARE PART D ENROLLEES WITH AND WITHOUT PRESCRIPTION DRUG COVERAGE GAP
Land Q, U.C. Hastings, J. Souder E.
University of Arkansas for Medical Sciences, Little Rock, AR, USA
OBJECTIVES: To compare socioeconomic and behavioral characteristics of Medicare Part D enrollees with coverage gaps with those who did not (no-gap), in 2007. The study is unique because it examined characteristics of Medicare Part D enrollees that are typically not available in administrative claims databases. METHODS: A survey based on the Seniors’ Prescription Coverage, Use and Survey and the Brief Medication Questionnaire was developed and distributed to elderly persons seeking care at the pharmacies within the University of Arkansas for Medical Sciences College of Pharmacy Advanced Community Practice Network. Patients recruited were years 65 or older, enrolled in Medicare Part D in 2007, and taking medications for any of the following conditions: hypertension, hyperlipidemia, diabetes, asthma/COPD, or depression. RESULTS: In this 2007-2008 phase, 69 patients were enrolled and 24 (34.8%) reported reaching the coverage gap in 2007. Among in-gap patients, 95% were aged 65–85 years and 58% were female, compared to 73% and 64% respectively for the no-gap subjects. Compared with the no-gap subjects, more in-gap subjects attended college (78% vs. 46%), had a monthly income of $2000 or more (70.8% vs. 56%), and spent more than $300 per month on medications (42% vs. 24%). Compared with no-gap patients, in-gap patients were less likely (54% vs. 69%) to report overall satisfaction with Part D programs. Finally, 87.5% of the in-gap patients reached the gap in September 2007 or later. CONCLUSIONS: One third of the subjects reached the coverage gap and most of them reached the gap within the last quarter of 2007, mitigating the impact of coverage gap to some extent. The in-gap group belonged to higher socioeconomic status, which was expected since the no-gap group appeared not to be at the risk of coverage gap because of low-income subsidies. Experiencing coverage gap negatively impacted patients’ satisfaction with Part D plans.

THE IMPACT OF NON-REFERRAL OUTPATIENT CO-PAYMENT ON MEDICAL CARE UTILIZATION AND EXPENDITURE IN TAIWAN
Chen CC, Schulhauede E, Noya P*, Wen YH*, Wu JJ.
KaoShing Medical University Hospital, KaoShing, Taiwan, University of Manchester, Manchester, UK, Bureau of National Health Insurance, KaoShing Taiwan.
OBJECTIVES: Taiwan’s National Health Insurance’s (NHI) generous coverage and patients’ freedom to access different tiers of medical facilities has resulted in accelerating the inpatient care utilisation. To determine non-referral outpatient initial contact in primary care, a differential co-payment was introduced on July 15, 2005. Under this, patients pay more for outpatient consultations at higher medical facilities, particularly if accessed without referral. This study aimed to explore the impact of medical activities and expenditure, different payment groups and tiers of medical facilities. METHODS: A segmented time-series analysis on regional weekly outpatient medical claims (January 2004 to July 2006). Outcome variables (number of visits, number of outpatient, total cost of outpatient care) and variables for cost structure were stratified by tiers of medical facilities and

ABOLITION OF PRESCRIPTION CO-PAYMENTS: AN ANALYSIS OF ITEMS DISPENSED IN WALES
‘Bangor University, Bangor, UK; University of Glamorgan, Pontypridd, UK; Cardiff University, Cardiff, UK.
OBJECTIVES: Prescription charges were abolished in Wales in April 2007. We hypothesised that as a result, the demand for prescription medicines might increase, and compared the rates of dispensing of the 15 medicines that most frequently incurred a prescription charge, versus a region with similar socio-economic characteristics but continues to charge patients (NE England). METHODS: BORIS Monthly data from 2002 to 2008 (one year post abolition) on the quantities of dispensed medicines were obtained from Health Solutions Wales and the Prescription Pricing Authority. Descriptive comparative analyses of unadjusted dispensing rates (per 1000 list size) were conducted for each medicine and region. RESULTS: The combined dispensing rates for all 15 medicines increased significantly in both regions, but the change in Wales was higher than that in England (Wales change = 57.67, p < 0.0001, 95% CI: 55.09 to 60.28; NE England change = 30.18, p < 0.0001, 95% CI: 27.32 to 33.03). The difference between regions was statistically significant (p < 0.0001). However, the data were unable to be interpreted in the context of the low proportion of prescriptions that were previously charged, and changes in clinical practice.

A COMPARISON OF POLICIES ON PAEDIATRIC DOSING GUIDELINES AND INDICATIONS BETWEEN THE UNITED STATES AND EUROPE
Nixon P, Chan M, Lock K.
Human Evidence Development Ltd, London, UK
OBJECTIVES: To compare legislation on paediatric dosing guidelines and indications between the US and Europe and to examine whether the introduction of new regulations and financial incentives has resulted in more pharmaceutical companies providing paediatric data. METHODS: Information was extracted from published policies and reports on paediatric therapeutics as published by the US Food and Drug Administration and the European Medicines Agency. RESULTS: In the US, the Food and Drug Administration Modernisation Act (FDAMA; 1997) offered six months of marketing exclusivity to manufacturers voluntarily conducting paediatric studies. Current legislation in the US consists of the Best Pharmaceuticals for Children Act (BPCA; 2002), and the Paediatric Research Equity Act (PREA; 2003). Manufacturers are also encouraged to obtain orphan drug designation for drugs or biological products for use in a paediatric population. To January 2008, the FDA has sent written requests for paediatric studies to sponsors of 301 drugs. There have been 157 incidents of labeling changes under the BPCA and 76 labeling changes or submissions of supporting information under the PREA. Legislation on paediatric therapeutics was issued in the EU in January 2007 (Regulation EC No 1901/2006 as amended). Since this time, the EMEA has adopted decisions on 99 applications for paediatric investigation plans (PiPs) and waivers; 57 positive opinions on PiPs; 3 proposed modifications to PiPs; and 39 waivers in all age groups for all conditions. Additionally, most European Health Technology Assessment agencies do not make special allowances for the assessment of paediatric PiPs. RESULTS: Paediatric legislation in the US has been successful in encouraging research into the use of therapeutics in paediatric patients. In the EU, although many applications of PiPs and waivers have been reviewed, the situation should be monitored over the coming years to determine if the legislation leads to changes.