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estimate costs for in-and outpatients. **RESULTS:** Among the 264_PAND and 132_POST inpatients, 30% were <18 years old, and 45% were women. The mean length of stay at general ward was of 6.5(6.1)-7.0(6.6) days (PAND and POST, respectively); and between 8.2(5.0) and 11.5(15.2) days for ICU patients (7%_PAND and 20%_POST). Among employed (45.3% PAND and 37.7% POST) most went on sick leave (99% and 93%) for about 31(37) and 38(27) days. Among outpatients (215_PAND and 175_POST), about 25-35% were under 17 years old, and 50-57% were women. The 94%(PAND) and 82%(POST) of employed (64,9% and 68,0%, respectively) went on sick leave. Absenteeism length of was 11(12)-7(45) days. The mean cost per inpatient was 6,028 € (SD=6,251) in PAND and 6,939€(SD=10,895) in POST. For outpatients the mean cost was 749€ (SD=886) in PAND and 421€ (SD=686) in POST. **CONCLUSIONS:** Contrary to what expected, resource utilization was quite similar for both influenza waves. However, differences on mean cost were found due to the slightly increase in inpatients health care utilization, and the decrease of absenteeism among outpatients during the post-pandemic wave. These results would be useful to assess the influenza real burden in Spain; both at individual and population level.

PHS18

### ECONOMIC BURDEN OF ATOPIC DERMATITIS FROM A UNITED STATES PAYER PERSPECTIVE

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**OBJECTIVES:** To estimate direct medical costs of atopic dermatitis (AD) from a US payer perspective. **METHODS:** Data came from a large employer-based longitudinal claims database, which captures person-specific clinical utilization, expenditures, and enrollment across inpatient, outpatient, prescription drug, and carve-out services. A matched case-control study design was employed. Cases were identified based on at least two AD-related medical claims with an International Classification of Disease v9 codes of 691.8x or 692.x anytime during the calendar year of 2009. Three controls were matched to each case based on age, gender, type of health plan enrolled, and censes region. Multivariate robust regression models were used to estimate the incremental burden of AD. A non-parametric bootstrap technique with 1000 replications was used to estimate the distribution of the beta coefficients and derive the 95% confidence limits. **RESULTS:** A total of 119,252 cases were matched to 357,756 controls with an average age of 46 years (SD=23.9), and 57% females. AD-related comorbidities such as allergic rhinitis, asthma, other types of allergies, sleep disturbances and attention deficit disorders were significantly greater ($p<0.01$) in proportion among cases vs. controls. After adjusting for all baseline differences, cases on an average had $912 (95% CL:$781-$1,042) greater overall cost per subject compared to controls. Top three drivers were attributed to outpatient costs (58%, $533), inpatient costs (22%, $201), and pharmacy costs (15%, $139), respectively. Among cases, dermatology-related overall costs were 370% (from $127 to $470) greater post index event. Over 80% of this increase was attributable to dermatology-related outpatient costs. Approximately, three additional dermatology-related outpatient visits were observed in the follow-up period compared to baseline. **CONCLUSIONS:** AD is costing the U.S. payer an additional $912 per-patient-per-year compared to subjects with no AD. Future research should determine the impact of current treatment on the economic burden of this disease.

PHS19

### MACRO-COSTING ANALYSIS OF HOSPITAL STAY IN HEART FAILURE PATIENTS IN TURKISH SETTING

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**OBJECTIVES:** The economic burden of heart failure (HF) has increased rapidly with the increasing prevalence and incidence of HF patients all around the world. In this abstract, the cost analysis of hospitalized HF patients is presented. **METHODS:** A sample of hospitalizations (n=166, year 2011) with diagnoses related with chronic HF in a state hospital serving to a wide range of populations was evaluated. The prices for ICU stay and cardiovascular procedures paid by Turkish state health security system were applied. Indirect costs are not taken into account. **RESULTS:** Twelve percent of the stays were in intensive care unit (ICU), 35% were in medical ward only and 53% of the stays were partly in ICU and medical ward; average duration were $2.51\pm3.09$ days, $4.45\pm4.07$ days and $6.95\pm5.08$ days, respectively. ICU stays are paid with fixed prices, without allowance for any extra payment for services or procedures performed while the patient stays in ICU. Average daily and total costs of ICU stay are calculated as 402€/day and 1006€, respectively. On the other hand, procedures are paid per service, while the patient stays in medical ward. Therefore the fixed amounts of payments for cardiovascular procedures, which are mostly performed during the stay of HF patients, were averaged by the frequencies of individual procedures. This yielded to 531€ per stay. Therefore the total cost of stay was obtained as 1537€, and average daily cost of stay as 221€/day. **CONCLUSIONS:** These figures are quite concordant with a previous analysis reported in 2009 (total cost of stay 1617€ and daily cost of stay 245€/day) in which micro-costing methods had been applied. Therefore these figures presented in this report could be used local input parameters for health economics models for HF.

PHS20

### COST ASSOCIATED TO THE MANAGEMENT OF INAPPROPRIATE SHOCKS IN PATIENTS WITH AN IMPLANTABLE CARDIOVERTER DEFIBRILLATOR – CARDINA STUDY

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**OBJECTIVES:** Inappropriate shocks are the most common complications of ICD, causing a negative effect on patients' morbidity and mortality. Little is known with regards to the cost associated to the management of IS. The aim of the study was to determine IS related factors and to evaluate its associated hospital cost. **METHODS:** All patients implanted with an ICD where retrospectively analyzed through clinical chart reviews in a Spanish hospital from 2003 to 2011. Demographic variables, baseline cardiomyopathy, comorbidities, indication and type of ICD implanted were registered. During the follow up period we identified the presence of IS, its reasons and associated costs. **RESULTS:** A total of 227 patients were implanted with an ICD, mean age 63.2 years (26-82). Eighty-six percent were men, 64.6% with ischemic cardiomyopathy, 78.4% with heart failure, 70.4% with EF<35% and 13.1% with AF. The proportion of single, dual and three chambers ICD was 54.6%, 20.3% and 25.1% respectively. After a median follow up of 4.46 years, 27 patients had had 42 IS episodes. Average time since implant to first IS was 1.3 years (range 0.02 to 3.84 years). Patients suffering from IS had higher mortality (33.3% vs 13.7%; $p<0.05$). Amost 67% of the episodes were due to supraventricular tachycardia, 12% to noise detection, 19% to Wave T overdetection and 2.3% due to other causes. Sixty-three percentages of the episodes generated an emergency visit and a 39% generated a non-scheduled visit to the cardiologist. Seven episodes (16.7%) required hospitalization, six of whom required a surgical intervention. Average length of stay was 5.1 days. Finally, overall mean hospital cost appeared to be €5,175 per episode. **CONCLUSIONS:** The cost of inappropriate shocks is driven by the reason of its cause. The great majorities of the episodes were due to supraventricular arrhythmias and finally resolved without the need for hospitalization.

PHS21

### OUT-OF-POCKET FINANCIAL BURDEN IN ATRIAL FIBRILLATION AND POTENTIAL IMPACT ON CARE: COMPARISON ACROSS FIVE EUROPEAN COUNTRIES USING THE EUROPEAN PATIENT SURVEY IN ATRIAL FIBRILLATION (EUPS-AF)

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**OBJECTIVES:** To assess out-of-pocket expenses reported by patients receiving chronic treatment for atrial fibrillation (AF) in five European countries. **METHODS:** The EUPS-AF questionnaire was adapted from the 2008 Commonwealth Fund International Health Policy Survey of Chronically Ill Adults. Computer-assisted digital telephone dialling was used to screen a random sample from the entire adult populations of France, Germany, Italy, Spain and the UK. Structured telephone interviews were conducted between February and July 2011. **RESULTS:** Interviews were conducted with 1507 patients (France, n=300; Germany, n=300; Italy, n=302; Spain, n=305; UK, n=300). On average, 40% of patients had incurred no out-of-pocket expenses for medical treatment or services over the past 12 months (range, 18% [Italy] to 75% [UK]). Of the 582 patients who reported out-of-pocket expenses (mean, €705), 221 (44%) declared that the costs included those due to AF (mean, €466). The lowest mean out-of-pocket cost per patient for AF care was reported in France (€92 [median, €82], n=14) and the highest in the UK (€1573 [median, €114], n=29). The majority of out-of-pocket expenses for AF were non-medical costs for treatment and services not covered by insurance, including travel and household help. The proportion of patients who claimed cost as a reason for not filling a prescription or skipping doses ranged from 3% in the UK and Spain to 10% in France. Failure to receive treatment due to lack of reimbursement was experienced least frequently in the UK (1% of patients) and most frequently in Germany (28% of patients). **CONCLUSIONS:** The EUPS-AF highlights differences in out-of-pocket expenses and levels of treatment reimbursement that patients with AF have to pay in five European countries. Payers, health care policy makers and clinicians should all be aware that the financial burden of AF is linked to treatment adherence and may affect patient satisfaction and treatment outcome.

PHS22

### BURDEN OF INVASIVE PNEUMOCOCCAL DISEASES IN OLDER ADULTS IN THE NEW EU COUNTRIES OF THE CENTRAL EUROPE

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**OBJECTIVES:** Streptococcus pneumoniae causes a wide spectrum of illness from upper respiratory tract infection to severe invasive pneumococcal disease (IPD), defined as the identification of S. pneumoniaea normally sterile site. The most severe IPD forms are meningitis, bacteraemia and septicaemia. Older adults are in an increased risk of death from IPD. The former socialistic countries of the central Europe form a unique region with specific health care and epidemiology characteristics, and where the local evidence on the underlying epidemiology is scarce. The objective was to estimate the economic burden of IPD in those ≥50 years of age in the Czech Republic (CR), Slovakia (SK), Poland (PL), and Hungary (HU) using most recent data available. **METHODS:** The incidence of IPD stratified by age groups 50-64, 65-74, 75-84 and ≥85 was obtained from national surveillance systems (PL,