PHS7
PREVALENCE AND COST OF ILLNESS OF SPECIFIC CONDITIONS IN A COMMERCIALLY INSURED UNITED STATES POPULATION

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OBJECTIVES: To calculate the prevalence rates and costs of common conditions using medical and pharmacy claims from a commercially insured US population in 2010. METHODS: This retrospective cohort analysis used administrative claims data from 14 major US health plans. Patients had ≥1 claim for a targeted condition (identified by ICD-9 or GPI codes) from 01/01/2010 through 12/31/2010. Descriptive statistics included means and relative frequencies. Costs reported for patients with 12 months continuous eligibility and presented as annualized per patient per month. Results include all patients regardless of length of eligibility. Patients were required to have ≥1 day of eligibility. RESULTS: The 10 most prevalent conditions: hypertension (13.9%), hyperlipidemia (13.6%), allergic rhinitis (5.6%), diabetes (4.8%), COPD/COPD-associated conditions (4.8%), diabetes without complications (4.7%), depression (other than major depression and bipolar disorder) 4.5%, osteoarthritis (3.8%), asthma (3.6%), osteoporosis/osteopenia (2.8%). Allergic rhinitis was most common among those ≤34 yrs; hyperlipidemia among patients aged 35–64 yrs; hypertension among patients ≥65 yrs. Highest average (PMPM) medical costs were: bone cancer $82,173 ($119,528); CNS cancer $81,101 ($110,829); brain cancer $74,005 ($87,244); subarachnoid hemorrhage $67,324 ($81,166); intracerebral hemorrhage $60,968 ($203,551); multiple myeloma $43,495 ($68,614); leukemia $41,873 ($68,703); lung cancer $40,691 ($79,279); colorectal cancer $34,498 ($65,025). Highest average (PMPM) pharmacy costs were: multiple myeloma $17,567 ($197,807); multiple sclerosis $14,198 ($164,682); leukemia $9,850 ($59,980); psoriatic arthritis $8,035 ($8,291); brain cancer $7,766 ($8,861); ankylosing spondylitis $5,989 ($6,324); bone cancer $5,211 ($5,498); CNS cancer $4,697 ($5,748); renal cancer $4,620 ($5,507). CONCLUSIONS: Hypertension and hyperlipidemia were more than twice as prevalent as the next most prevalent condition in 2010; this pattern held for females and generally held across geographic regions of the US. Consistent with prior research, cancers and cancer treatments were consistently 4 among the most expensive for health plans in 2010.

PHS8
USE OF HEALTH CARE ADMINISTRATIVE DATABASES TO ESTIMATE INCIDENCE OF FOOT COMPLICATIONS IN DIABETES PATIENTS

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OBJECTIVES: Foot complications (e.g. infections, abscesses) are common in patients with diabetes mellitus (DM) and are associated with high morbidity and risk of lower extremity amputation. The objective of this analysis was to estimate the incidence of foot complications in patients with a diabetes diagnosis. METHODS: DM population in Lombardy Region (Italy) was identified through a data warehouse (DENALI), matching with probabilistic record linkage demographic, clinical and economic data of different Healthcare Administrative databases. We selected individual patients with diabetes diagnosis prior to December 31, 2000 (hospital discharge with an ICD-9 CM code 250.XX, and/or an IDC-9 CM code 250.XX, and/or two consecutive prescriptions of drugs for diabetes (ATC code A10XXXX) within one year, and/or an exemption from co-payment health care costs specific for DM). From this cohort, we identified patients requiring a claim for foot complications for one and 34,375 T2D patients and 1,506 T1D patients from 104 GP practices in UK, and 34,375 T2D patients and 1,506 T1D patients from 104 GP practices in Germany and in the UK. METHODS: Computerized data on lab values (IMS Disease Analyzer Multi-Country Solution, 01/2011-12/2011) from general medicine practices throughout DE and UK have been analysed and compared. This data warehouse includes the complete diagnosis and therapy relevant information on diabetes patients in several countries. T2D and T1D patients were included. RESULTS: T2D patients and 1,910 T1D patients from 1,001 GP practices in Germany and 34,375 T2D patients and 1,506 T1D patients from 104 GP practices in UK were included. RESULTS: 53.1% of T2D patients and 42.0% of T1D patients in Germany, 87.0% of T2D patients and 69.1% of T1D patients in UK had at least one HbA1c testing in the observation time. In Germany there were 1.5 HbA 1c tests per year in T2D patients and 1.1 tests per year in T1D patients. In UK T2D patients have in average 3.1, T1D patients 2.0 HbA1c tests in 2011. CONCLUSIONS: The study revealed that HbA1c testing was underused in both T2D and T1D patients. Improvement is needed in the utilization of HbA1c testing among diabetes patients in Germany and UK. HbA1c tests should be obtained routinely in all persons with diabetes, for the blood glucose control documentation and as part of continuing care.

PHS11
RELATIONSHIP BETWEEN PHYSICAL FUNCTION AND MUSCLE STRENGTH IN THE UNITED STATES ELDERLY POPULATION

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OBJECTIVES: To examine physical function by muscle strength in the US elderly population. METHODS: Indigenous aged 50 and above from the Health and Nutrition Examination Survey (NHANES) 1999-2002 databases were selected. Functional strength was measured via 20-foot walking speed (WS) in meters/second, having difficulty walking up 10 steps (yes/no), and having difficulty standing up from armless chairs (yes/no). Muscle strength was measured via the isokinetic quadriceps strength (expressed in newton-meters) measured based on age and gender (10 groups) adjusted muscle strength (high strength ≥ the median within each age and gender group). Demographics, comorbidities, and body mass index (BMI) were compared between the high and low strength groups. The association between high/low muscle strength and 20-foot WS was analyzed via multiple linear regression that utilized survey strata and weighting and controlled for between-group differences in demographics, BMI, and comorbidities. Logistic regressions were employed to examine the relationship between having difficulty walking up 10 steps or standing up from armless chairs and high/low muscle strength, respectively. RESULTS: The study included 646 individuals with 320 in the high and 326 in the low strength cohorts. More individuals with low muscle strength had diabetes, arthritis, and osteoporosis than those with high muscle strength. Mean BMI was also higher in the high strength cohort. Controlling for differences in demographics, comorbidities, and BMI, individuals in the high strength cohort had significantly faster 20-foot WS speed (0.10, p<0.05) and were less likely to have difficulty standing up from armless chairs (Odds Ratio = 0.32, p<0.05) compared with those in the low strength cohort. CONCLUSIONS: Among individuals aged 50 and above in the US, high muscle strength is positively correlated with WS but negatively correlated with having difficulty standing up from armless chairs.
pertension, serum cholesterol, and diabetes mellitus decreases the risk ofParkinson’s disease (PD). We therefore examined the epidemiologic association of PD with hyperpertension, serum total cholesterol, and diabetes mellitus by conducting a detailed meta-analysis of all studies published regarding this subject. METHODS: A systematic comprehensive literature search was performed using PubMed, EMBASE, and CINAHL (until March 2012) for observational cohort and case-control studies using relevant keywords. Pooled relative risk (RR) was calculated using random effects model. Pre specified subgroup analysis was performed to assess the source of heterogeneity, according to study design, number of covariates adjusted and adjusted for BMI and cardiovascular diseases. Subgroup and sensitivity analysis were also done. Heterogeneity and publication bias were also assessed. RESULTS: 24 studies were included in the analysis. The pooled risk ratio of PD due to hypertension (n = 8) was 0.78 (95% CI, 0.67-0.92, Z = 71.85%), due to high serum cholesterol (n = 7) was 0.95 (95% CI, 0.77-1.17, Z = 75.86%), and due to diabetes (n = 18) was 0.94 (95% CI, 0.76-1.16, Z = 89.62%). Subgroup analysis showed a significant difference between international population (countries with intercountry interaction = 0.01). Pooled analysis of cohort studies for diabetes showed a pooled risk ratio of 1.34 (95%CI, 1.12-1.60, Z = -76.77%). We found no significant difference in any subgroup analysis. CONCLUSIONS: We found evidence of significant inverse associations of hypertension, hypercholesterolemia, and diabetes mellitus with the risk of PD. Further well-designed investigations of the association of vascular risk factors with the risk of PD are needed, particularly large-scale prospective studies.

HEALTH SERVICES - Cost Studies

PHS13 COSTS ANALYSIS OF A MOBILE PHONE TELEMONITORING SYSTEM FOR GLYCAEMIC CONTROL IN PATIENTS WITH DIABETES MELLITUS (DM) IN SPAIN: PRELIMINARY RESULTS

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OBJECTIVES: Technological developments allow remote monitoring of patients and improve diabetes care. A mobile phone telemonitoring system (TM) might improve the ability of DM patients to engage in treatment. The objective is to estimate the annual costs that implementing a TM for glycemic control in DM patients might represent to the National Health System and to society in Spain.

METHODS: First, a systematic review of the literature was conducted to determine cost drivers in DM TM. Electronic databases were searched to identify national and international clinical and economic articles, published between January, 2001 and December, 2011, reporting on the clinical benefits, health resources used and costs associated to DM TM. Second, based on the data gathered, and adapted for Spain, and on the assumption that TM favors treatment compliance, a mathematical model was applied to determine the variation in costs associated to macro and micro DM complications risk reduction derived from hypothetically reaching 100% glycemic control in DM patients.

RESULTS: 24 studies were included in the analysis. The total mean cost reduction per year attributable to TM use for glycemic control in DM patients was 3,369.1 vs. 4,362.1 and SD 4,902.3 (P < 0.001). Overage age: 69.4 years and 55.5% women. The group of 3-6 drugs showed a higher cost reduction of 120.82 per DM patient/year due to less travel expenses (-6.30 €/visit) and productivity gain (+54 €/visit). Assuming that 100% of uncompliant DM patients become compliant (n = 1,550,634 patients) costs associated to macro- and micro-vascular complications decreased by 5,500,000 € and 7.5 million per year. Higher cost reductions are obtained in the most prevalent vascular complications.

CONCLUSIONS: These preliminary results show that TM in DM patients reduces direct and indirect costs. Significant costs reduction can be reached if DM treatment compliance is improved with TM in Spain.

PHS14 CLINICAL AND ECONOMIC ANALYSIS OF “MOLICARE® PREMIUM EXTRA SOFT” DIAPERS EFFICIENT APPLICATION FOR DERMATITIS AND PRESSURE ULCERS’ PROPHYLAXIS FOR IMMOBILE URINARY-INCONTINENT PATIENTS

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OBJECTIVES: To carry out a clinical-economic analysis of Molicare® Premium extra soft diapers application efficiency for contact dermatitis and pressure ulcers prophylaxis with immobile urinary-incontinent patients. METHODS: Estimation of typical management practice with immobile urinary-incontinent patients’ having developing nephrotic dermatis” disease ulcers were performed by means of experts’ questioning. Only direct medical costs were taken into account in the research. A comparative clinical-economic analysis was performed using Markov’s model. A sensitivity analysis was performed taken into account the result. Overall this clinical-economic analysis shows that medical-prophylactic institutions’ costs for contact dermatitis’ and pressure ulcers’ prophylaxis and treatment with one immobile urinary-incontinent patient without absorbing means and skin care agents applying are considerably higher (by 41%) than when they are applied. At the same time indirect costs including lining disinfection, washing, drying and ironing were not taken into account and such costs can increase a costs’ total figure. CONCLUSIONS: Absorbtion means and skin care agents’ application for contact dermatitis and pressure ulcers prophylaxis and treatment with immobile urinary-incontinent patients is a dominant technique and cost efficacy of using absorbent means and skin care agents was demonstrated. The branch standard “Patients’ management protocol. Pressure ulcers” (2002) needs actualization taking into account the data obtained in the present clinical-economic research.

PHS15 RECOMMENDATION FOR ROTAVIRUS VACCINATION AND HERD EFFECT: ANALYZING COST DATA FROM A GERMAN STATUTORY HEALTH INSURANCE

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OBJECTIVE: To quantify the financial effects of the introduction of a recommen-
dation for rotavirus vaccination (RVV) in Germany. A systematic evidence based data analysis. Special emphasis is given to the herd effect. METHODS: We analyzed the costs of rotavirus infection between 2007 and 2010 based on 360.000 observations from the AOK Plus of children under 5 years for Saxony. To investigate the cost impact of the regional recommendation, we compared the associated costs of RVV in vaccinated and non-vaccinated cases. RESULTS: Costs of RVV were not yet available, with the actual annual number of RVGE cases derived from 20 when rotavirus vaccination was not yet available. We obtained following estimates: the mean total cost reduction per year attributable to introducing a recommendation for rotavirus vaccination is 4.5 million € (2.4 million € for the SHI and 2.1 million € for the societal (SHI) perspective). The mean cost of one avoided case rise from 572 € (291 € in 2007 to 718 € (375 €) in 2010. The overall share of outpatient costs is about 72% (60%). About 45% of the total savings is attributable to herd effect. The herd effect per avoided case decreases over time while immu-
nization rate decreases. A recommendation for rotavirus vaccination in Saxony turns out to be cost saving from the SHI as well as the societal perspective. This is mainly attributed to the herd effect being present when having high vacci-
nation rates.

PHS16 RELATIONSHIP OF POLYMEDICATION IN CONTROLLING BLOOD PRESSURE: COSTS, PERSISTENCE, AND INCIDENCE OF NEW CARDIOVASCULAR EVENTS

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OBJECTIVES: To determine the relationship of polypharmacy on blood pressure (BP) control, compliance, persistence, the cost and incidence of cardiovascular events (CVD) in patients with moderate/severe hypertension. METHODS: An observa-
tional multcenter retrospective study. We evaluated patients > 30 years who started a third antihypertensive treatment during 2004-2006. Depending on the number of chronic medications, we established 3 groups: regular consumption of 3-6 drugs, between 7-10 and above 10 drugs. RESULTS: The groups showed lower BP control (OR 1.4 [95% CI 1.1-2.0], P = 0.05). The use of anti-
hypertensive fixed dose has greater compliance (72.8 vs. 68.2%), persistence (64.3 vs. 39.3%) and degree of BP control (52.6 vs. 43.8%, P = 0.001). CONCLUSIONS: Polypharmacy is associated with lower compliance and persistence to antihy-
pertensive treatment, cardiovascular disease and increased health care costs.

PHS17 COSTS OF INFLUENZA A(H1N1)2009 INFECTION DURING THE PANDEMIC AND THE POSTPANDEMIC-SEASONAL WAVES

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OBJECTIVES: We estimated the impact of influenza A(H1N1)2009 infection in terms of patient’s health care services utilization, work absenteeism and costs, both during the pandemic and postpandemic-seasonal (2009-11) waves in Spain. METHODS: Longitudinal, multi-centre study of in- and outpatients with RT-PCR confirmed diagnosis of influenza at pandemic(PAND) and postpandemic-seasonal(COST) waves. Health care and social resources utilization were the main vari-
ables, together with clinical and sociodemographic characteristics. Evaluations were conducted at hospital-admission or ambulatory index visit, and after recovery (median=100 days). Unitary costs and Monte Carlo simulation were applied to

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