PIH62

MEASURING SPENDING TRENDS FOR THOSE WITH EMPLOYER-SPONSORED INSURANCE USING ADMINISTRATIVE DATA

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OBJECTIVES: There is limited timely information about healthcare spending in the US for those people under 65 with employer-sponsored insurance. This study explores the methods needed to use a large administrative database to fill this need. The fully implemented methodology will be used to portray recent trends in overall spending and highlight the role of prescription drugs in the context of those trends. **METHODS:** The Truven Health MarketScan database is updated each calendar quarter. This convenience sample is weighted to reflect the age, sex, and location characteristics of the US population with employer-sponsored insurance as captured by the US Medical Expenditure Panel Survey. Recent quarterly spending is adjusted for incurred but not yet reported services using a combination of correction factors and time series analysis. Spending is classified either by setting or by provider type. Overall and subpopulation breakdowns are presented. **RESULTS:** Per capita annual spending has seen a compound annual growth rate of 5.2% over the period of 2003–2013. While the 0–17 age group has seen the highest annual growth rate at 6.5% (from $1,476 in 2003 to $2,772 in 2013), the 45–64 age group continues to have a higher level of expenditure ($8,175) despite a lower annual growth rate of 4.1%. Outpatient spending grew faster (6.0%) than either inpatient (4.5%) or prescription drug (4.0%). In the most recent year there has been an uptick in prescription drug spending fueled almost entirely by new treatments for Hepatitis C. **CONCLUSIONS:** It is possible to create a useful, timely index of spending for the under 65 population of the US with employer-sponsored insurance. Recent trends indicate a growth in spending for children and a recently revived growth for prescription drugs.

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TEMPORAL TREND IN USE OF PERMANENT FEMALE STERILIZATION PROCEDURES AND CHARACTERISTICS OF WOMEN WHO UNDERGO THEM IN A COMMERCIALLY-INSURED POPULATION IN THE U.S

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OBJECTIVES: Literature is lacking on the temporal pattern of use of permanent sterilization procedures and the characteristics of women who undergo them. This study evaluated the temporal pattern of use of hysteroscopic sterilization (HS) vs. interval laparoscopic bilateral tubal ligation (LBTL) and differences in characteristics of women who undergo permanent sterilization procedures. **METHODS:** Women aged 15-49 years who had a claim for HS or LBTL procedures during 1/1/2003-12/31/2012 were identified from the Truven Health MarketScan Commercial Claims and Encounters database. The proportions and characteristics of women who underwent HS and LBTL were determined for the study population and subgroups stratified by year of procedure. Logistic regressions were used to identify predictors of use of HS vs. LBTL. **RESULTS:** Among the study population, 32,012 had HS and 64,725 had LBTL. Women who had HS vs. LBTL were slightly older (37.2 vs. 36.4 years, p<0.0001), but had similar Charlson Comorbidity Index scores. The proportion of women who had HS increased from 7% in 2005 to 45% in 2012. Compared to women who had a sterilization procedure between 2003 and 2007, women who had one between 2008 and 2012 were more likely to undergo HS (Odds Ratio (OR): 7.1, p<0.0001). Obesity was associated with a greater likelihood of having HS vs. LBTL (OR: 1.08, p=0.03). Additionally, slightly greater age (OR: 1.03, p<0.0001), having had a prior pregnancy/delivery (OR: 1.38, p<0.0001), and having had prior oral contraceptive use (OR: 1.53, p<0.0001) were associated with greater likelihoods of having had HS than LBTL. **CONCLUSIONS:** Using a large claims database analysis, we observed among commercially-insured women that the likelihood of having HS vs. LBTL increased approximately 7-fold in years 2008-2012 from in years 2003-2007. Older age, prior pregnancy/delivery, and prior oral contraceptive use were associated with a greater likelihood of having HS vs. LBTL.

PIH64

GENDER DISPARITIES IN MIGRAINE PHARMACOTHERAPY: APPLICATION OF PROPENSITY SCORE-MATCHED ANALYSES

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OBJECTIVES: Migraine is a debilitating chronic disease that affects approximately 13% of the United States population. Gender differences in migraine treatment have been studied; however, the results are often overlooked due to lack of controlling for selection bias. The study aimed to investigate gender differences in migraine treatment, using propensity score-matched analyses. **METHODS:** A retrospective population-based study was conducted by analyzing a national database from 2010 National Ambulatory Medical Care Survey. All patient visits with a diagnosis of migraine were included. A series of weighted descriptive analyses were used to estimate the prevalence of medications recommended in the American Neurology Association practice guidelines. Multivariate logistic regression and Greedy 8 to 1 digit match were used to create propensity scores. A propensity score weighted logistic regression model was fitted to compare the gender difference on migraine treatment while controlling for age, race, pay type, and physician specialty. All analyses utilized SAS PROCSURVEY applications and incorporated sample weights and standard errors. **RESULTS:** Among 5.45 million outpatient visits that took place in 2010 with migraine diagnosis, female accounted for nearly four-times than male (79.8% vs. 20.2%). Of these, 3.08 million visits (56.48%) received at least one abortive or prophylactic migraine prescription. Prior to propensity-score matching, the socio-economic characteristics of the two cohorts (with vs. without migraine pharmacotherapy) were significantly different (P<0.001). After matching, there was no longer a significant difference between two cohorts (P>0.05). Female received significant more migraine treatment than male (OR: 3.2, 95% CI: 1.137-8.932). **CONCLUSIONS:** The assessment of gender differences in health care is challenging because of the potential biases that require careful adjustment. This study successfully reduced selection bias by propensity score-matched methodology and concluded significant gender disparity in migraine pharmacotherapy. This study also provides an empirical evident of undertreated migraine conditions in the US.

PIH65

TREATMENT PATTERNS OF WOMEN DIAGNOSED WITH UTERINE FIBROIDS 5 YEARS PRE AND POST DIAGNOSIS: A LONGITUDINAL RETROSPECTIVE CLAIMS ANALYSIS OF A COMMERCIALLY INSURED POPULATION IN THE US

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OBJECTIVES: To evaluate treatment patterns among women with uterine fibroid (UF) versus matched controls for 5 years before and after diagnosis. **METHODS:** Women with a UF diagnosis (International Classification of Diseases 218.xx) aged 18-45 years were identified in Truven Health MarketScan® 2000-2010 data, and matched 1:1 to women without UF (control) by age, region, and insurance type. The first recorded UF diagnosis date was assigned as the index date for the UF patient and matched control. Continuous eligibility in a health plan for ≥1 year pre- and post-index was required. UF-related medications and surgical treatments during the five pre- and post-index years were evaluated annually, and compared between UF patients and controls using McNemar's tests. **RESULTS:** A total of 84,954 matched pairs, with a mean age of 39.3 years at the index date were included in the analysis. During the 3 years prior to the index date, annual medication use (ranging from 18.7-19.5% vs. 16.5-18.4% for combined oral contraceptives and 0.4-0.9% vs. 0.2-0.3% for GnRH agonists) and UF-related surgery use (0.8-0.9% vs. 0.1-0.4% for endometrial ablations), respectively, was significantly higher among UF patients than controls (all p values <0.05). In the first year post-index, a greater proportion of UF patients than controls were treated with medications (combined oral contraceptives, 17.1% vs. 15.6%; progestins, 10.7% vs. 4.9%; and GnRH agonists, 2.8% vs. 0.2%) and surgeries (hysterectomies, 27.9% vs. 0.5%; endometrial ablations, 6.3% vs. 0.6%; myomectomies, 5.9% vs. <<0.1%), respectively (all p values <0.05). In the next four years of follow-up, the annual utilization difference decreased, but remained higher in UF patients and the differences were significant for GnRH agonist, hysterectomy, and myomectomy use. **CONCLUSIONS:** Patients with UF used significantly more UF treatments than controls after diagnosis, and also during the period before diagnosis. Treatment usage peaked in the first year post-diagnosis.

MENTAL HEALTH – Clinical Outcomes Studies

PMH1

HEALTHCARE UTILIZATION AND COSTS OF SEROTONIN SYNDROME WITH CONCOMITANT USE OF SEROTONERGIC AGENTS

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OBJECTIVES: Serotonin syndrome (SS) is an adverse drug reaction that may occur in patients receiving monotherapy or combinations of serotonergic agents (SAs). This study examined healthcare utilization and costs of SS in two different populations. **METHODS:** Adult (age ≥18 years) patients prescribed SAs were identified using the Veterans Health Administration (VHA) dataset (01OCT2008-30SEPT2012) and the IMS PharMetrics Plus dataset (01JAN2010-31DEC2013). Patients with continuous health plan enrollment 12 months pre-index date, defined as the first SA prescription claim date, were included and observed until death, disenrollment or the end of the study period. Patients were assigned to cohorts based on drug exposure: single monoamine oxidase inhibitor (MAOI) drug, MAOI drugs in combination with other SAs, single non-MAOI SA, and multiple non-MAOI SAs (2, 3, 4, and ≥5 SAs). Outcomes of interest were annual incidences of SS event (ICD-9-CM: 333.99) and associated health care utilization and costs. **RESULTS:** The incidence rate of SS was similar between veterans (VHA) and commercially insured patients (IMS) prescribed SAs and decreased over time (IMS: 0.17% in 2010 to 0.09% in 2013; VHA: 0.19% in 2009 to 0.07% in 2012). 0.88% and 4.35% of all SS events led to hospitalization in the IMS and VHA populations, respectively. Proportion of IMS patients with SS-related hospitalization increased as the number of non-MAOI SAs increased (0.24% for one drug vs. 6.93% for ≥5 drugs). Average healthcare cost per SS event was higher in the MAOI combination cohort (IMS: $2,474; VHA: $2,896) and the ≥5 non-MAOI SAs cohort (IMS: $1,167; VHA: $3,837) than the single non-MAOI SA cohort. **CONCLUSIONS:** The overall incidence of SS and proportion of serious SS leading to hospitalization are similar in the VHA and IMS populations. Use of MAOIs or multiple SAs concomitantly increases the risk of SS and leads to higher health care utilization and costs.

PMH2

ANTICHOLINERGIC MEDICATION USE AND RISK OF INCIDENT FRACTURES IN THE ELDERLY WITH DEPRESSION

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OBJECTIVES: There is limited evidence regarding the role of anticholinergic medications in falls/fractures among the elderly. This study examined the risk of fractures associated with anticholinergic use in elderly nursing home residents with depression. **METHODS:** A population-based nested case control study was conducted using 2007-2010 Minimum Data Set (MDS)-linked Medicare data from all states. Patients with continuous coverage in Medicare Parts A, B, D and no HMO coverage during the study period or until death were considered. The base cohort included