OR3
THE DIRECT AND INDIRECT COSTS ASSOCIATED WITH HYPOGONADISM AMONG PRIVATELY-INSURED EMPLOYEES IN THE UNITED STATES
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OBJECTIVES: Cost of direct and indirect (workrelated) costs between privately-insured US employees with hypogonadism (HG) and demographically matched controls without HG.
METHODS: Male employees, ages 35-64, with ≥2 HG diagnoses (ICD-9-CM: 257.2x) or ≥1 HG diagnosis and ≥1 claim for testosterone therapy between 1/1/2005-3/31/2009 were identified from a privately-insured claims database (N=12,000,000). The index date was defined as the most recent HG diagnosis with continuous eligibility ≥1 year before (baseline period) and 1 year after (study period).
Employees with HG were matched 1:1 on age, region, employment status, and index date. Eligible MEPS respondents aged 24–59 years with an ICD-9-CM diabetes diagnostic were selected to provide complete panel data from the Medical Expenditure Panel Survey (MEPS). Incremental costs between typical and atypical antipsychotic medication users in HMOs because patients in claims data were not assigned to treatment by randomization.
RESULTS: Multivariate analyses adjusting for baseline patient differences were used to estimate risk-adjusted costs. RESULTS: 4,269 HG employees, mean age 51, with matched controls met inclusion criteria. Compared with controls, HG employees had higher baseline comorbidity rates: hypertension (50.2% vs. 25.3%), HIV/AIDS (7.1% vs. 0.3%) (all p<0.001). HG employees had higher study period rates of inpatient stays (10.8% vs. 5.2%), Emergency Department visits (25.7% vs. 16.3%), outpatient visits (100.0% vs. 76.7%), prescription medication use (95.7% vs. 68.3%), and higher mean workday losses (19.3 vs. 8.8 (all p<0.001). HMO employees compared with controls had higher mean study period direct ($10,914 vs. $3,823) and indirect costs ($3,204 vs. $1,450); HG-related direct costs were $832. HG employees’ costs remained higher after adjusting for baseline differences (direct: $9,291 vs. $5,248; indirect: $727 vs. $1,840) (all p<0.001). CONCLUSIONS: Employees with HG had higher comorbidity rates and costs compared with demographically matched controls. Given the high HG-related costs, the main driver of overall costs among HG patients may be their comorbidity burden.

OR4
ASSOCIATIONS BETWEEN JOBLESSNESS AND ALL-CAUSE HEALTH SERVICES UTILIZATION IN DIABETIC WORKING-AGE ADULTS IN THE UNITED STATES
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OBJECTIVES: To assess associations between joblessness and all-cause emergency department (ED), hospitalization, outpatient and office-based health services utilization in US diabetic working-age adults. To assess associations between joblessness and all-cause emergency department (ED), hospitalization, outpatient and office-based health services utilization in US diabetic working-age adults.
METHODS: This retrospective longitudinal panel design used nationally-representative 2001 – 2007 pooled public domain complete panel data from the Medical Expenditure Panel Survey (MEPS). Eligible MEPS respondents aged 24-59 years with an ICD-9-CM diabetes diagnostic code “250”, were included. Those with pregnancy diagnostic codes, seasonal job status, or prescribed insulin were excluded. Subjects reporting an employment status with no job report were defined as unemployed. MEPS weights were applied for the complex survey design, logistic regression models estimated associations between joblessness and the likelihood of utilization. Negative binomial regression models assessed number of utilizations. The Taylor linearization method estimated variance. RESULTS: 2,148.50 – 2,811.16] and $1,242.41 [95%CI: 1,020.10 – 1,469.18] using the two-stage Tobit.

SB1
COMPARISON OF DIFFERENCE-IN-DIFFERENCE, PROPENSITY SCORE MATCHING AND INSTRUMENTAL VARIABLES IN ESTIMATING COST DIFFERENCES BETWEEN TWO COHORTS
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OBJECTIVES: Endogeneity is a common problem in retrospective claims data studies because patients in claims data were not assigned to treatment by randomization. Propensity score matching (PSM), instrumental variables (IV), and difference-in-difference (DiD) have been used to control for selection bias in evaluating the impact of treatment on outcome measures. This study compares the estimated incremental costs between typical and atypical antipsychotic medication users in patients with schizophrenia using these three methods. METHODS: Patients ages 18-64 years old with at least one prescription of typical or atypical antipsychotic medication and at least one diagnosis claim of schizophrenia (ICD-9-CM diagnosis 295.xx) within 90 days of the antipsychotic medication were identified in MarketScan® Multi-State Medicaid Database 2002-2009. The index date was the first prescription date of antipsychotic medication. All patients had ≥12-month continuous enrollment prior to and post the index date. Outcomes were total all-cause expenditures and psychiatric-related expenditures during the 12-month follow-up. The incremental costs associated with the use of typical antipsychotic medication versus atypical medication was estimated using six regression models—three estimation methods (GLM, IV, and DID) on two samples (matched and non-matched sample). IV was prescribing physicians’ characteristics. RESULTS: A total of 447 antipsychotic medication users were included in the analysis with low back pain and neck pain and demonstrated the consequences of ignoring zeros in jobless patient and unreported absenteeism.
METHODS: We used employer-based claims from the Thomson MarketScan® Research Database (2007), a database representing approximately 100 payers of insured employees containing health and productivity management (HPM) and health care utilization data. Adult insured employees with continuous eligibility in 2007 were included. The ICD-9 codes identified medical conditions including low back and neck pain without (nociceptive pain, NOCI) or with a neuropathic component (mixed pain, MIXED). Ordinary least squares (OLS) and two-stage Tobit analyses evaluated the marginal costs while OLS and Heckman’s Selection model evaluated the unreported absenteeism data. Estimated inpatient costs and absenteeism using OLS versus two-stage techniques were compared. RESULTS: A total of 2,046,332 employees (male=59.2%, mean age 40.2±11.6 years) were analyzed. Hypertension (9.8%), NOCI (9.5%), diabetes (7.1%), MIXED (0.0%) and depression (1.1%) were the most prevalent medical conditions among these employees. 1,976,952 (96.6%) employees had no inpatient episodes, thus, with no inpatient costs. Mean inpatient cost for the entire study population was $357.45 (median: $0) versus $15,851.93 (median: $8,302.20) among those with inpatient episodes. The incremental inpatient costs associated with MIXED and NOCI were $1,333.62±26.57 and $328.36±15.63 using OLS versus $2,478.97 [95%CI: 1,214.50 – 2,811.16] and $1,242.41 [95%CI: 1,020.10 – 1,469.18] using the two-stage Tobit. Unreported absenteeism occurred in 80% of the employees. In the absence of inpatient absenteeism associated with MIXED and NOCI using OLS were 5.25±1.10 and 4.35±1.35 compared to 5.65±1.07 and 4.35±1.35 comparing the two-stage Tobit. Ignoring the zeros in cost data and unreported absenteeism may result in substantial underestimation of inpatient cost and workplace absenteeism associated with low back and neck pain.

SB3
INNOVATIVE DESIGN FOR A COMPARATIVE EFFECTIVENESS STUDY OF SCHIZOPHRENIA TREATMENTS: ANALYSIS OF RECORD REVIEW DATA INCORPORATING RANDOMIZATION AND PROPENSITY SCORE MATCHING
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OBJECTIVES: Abstraction of hospital records is currently underway at inpatient psychiatric facilities across the United States to facilitate a large comparative effectiveness study with the following goals: 1) to observe and describe utilization and treatment patterns among patients with schizophrenia, and 2) to compare re-hospitalization outcomes between patients receiving paliperidone palmitate and those receiving oral atypical antipsychotics. This abstract is intended to describe the innovative design of this study. DESIGN/METHODS: This naturalistic record review study incorporates several novel design elements and a unique two-phase abstraction process. In the first phase, all patients with a qualifying inpatient hospitalization for schizophrenia are identified and basic demographic, clinical, and treatment data is abstracted. From this pool of potentially-eligible patients, two groups are formed: 1) patients discharged alive, and 2) patients discharged on oral atypical antipsychotics. Random samples of patients are drawn from each of these groups and designated for full data collection in phase two. In the second review phase, these designated records are further abstracted to collect detailed data on hospitalization and re-hospitalization data, comorbidity severity, co-morbid conditions, and discharge characteristics. These variables are used to model propensity scores for receipt of the target drug, and identify two propensity-matched cohorts for the subsequent comparative effective study. Pilot testing at three hospitals has confirmed the availability of key data ele-