MENTAL HEALTH - Cost Studies

PMH20
THE IMPACT OF LONG ACTING INJECTABLE MEDICATIONS ON PATIENT OUTCOMES

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OBJECTIVES: Assess behavioral health care utilization and expenditures for patients receiving long acting injectable medications. **METHODS:** A long acting injectable psychotropic medication is a sustained-action drug formulation administered through intra-muscular injection that allows slow release and gradual absorption. This was a retrospective study using behavioral health and pharmacy claims data. Commercial patients from a large national health plan diagnosed with schizophrenia, substance-related disorders, or mood disorders who received a long acting injectable between January 1, 2012 and July 31, 2015 were identified. A second cohort was comprised of patients with the same conditions during the same timeframe who did not receive a long acting injectable. Patterns of utilization and expenditures were compared between patients with injectables and patients without. Outcomes were measured over a 90 day period starting from either their initial injection (for patients with injectables) or their initial encounter (for patients without). **RESULTS:** Patients receiving an injectable incurred lower expenditures overall ($3,002 vs. $5,064, p<.05) and had fewer intermediate stays (5.5 vs. 7.9, p<0.05) and outpatient visits (2.8 vs. 5.2, p<0.05) than patients who did not receive an injection. Similar patterns were also observed among patients who had 3 or more injectables ($1,959 vs. $3,223, p<0.05) and patients who were administered Naltrexone specifically ($3,130 vs. $5,474, p<0.05) than patients who did not receive any injections. Patients with a history of injectables incurred lower expenditures ($1,371 vs. $2,471, p<0.05) and had fewer intermediate behavioral health care stays (1.8 vs. 4.9, p<0.05) than patients who were new to the injectable treatment. **CONCLUSIONS:** Commercial patients incurred lower behavioral health care utilization and expenditures after receiving long acting injectables. Use of long acting injectable psychotropic medications to treat patients with select behavioral health conditions may be a more cost effective alternative to traditional drug therapies.

PMH21
USING PRIVATE CLAIMS DATA TO STUDY THE COST OF THE OPIOID CRISIS

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OBJECTIVES: Identify trends in healthcare costs and demand for services attributable to the opioid epidemic nationwide 2011-2015. **METHODS:** FAIR Health analyzed its dataset of billions of private healthcare claims records to identify claims with ICD-9-CM and ICD-10-CM diagnostic codes indicative of opioid abuse and dependence, then aggregated the data by key fields such as state, procedure code and year of service, and determined cost by both charges and imputed allowed amounts. **RESULTS:** From 2011 to 2015, the national aggregated dollar value of charges for opioid abuse and dependence and imputed allowed amounts for such diagnoses rose over 1,000 percent. In 2015, private payors' average costs for a patient diagnosed with opioid abuse or dependence were 556 percent higher—almost $16,000 more per patient—than the per-patient average cost based on all patients' claims. From 2011 to 2014, the greatest increase in services for patients diagnosed with opioid abuse and dependence was in alcohol and/or drug services/therapy, which increased 1,189 percent, followed by laboratory tests at 848 percent. States' average charges for services associated with opioid abuse and dependence diagnoses varied widely. In 2014, the states with the highest associated average per-service charges were Iowa ($263) and Washington, DC ($247). Those with the lowest were Rhode Island ($45) and South Carolina ($60). **CONCLUSIONS:** The opioid crisis is having a profound economic impact on the healthcare system. Both billed charges and allowed amounts for services associated with opioid abuse and opioid dependence have increased dramatically in recent years. Certain categories of care, including alcohol and/or drug services/therapy and laboratory tests, have increased in utilization more than others. Although states vary in the level of their average per-service charges, the overall pattern is one of increasing demand for treatment for opioid abuse and dependence, with correspondingly higher costs for payors.

PMH22
THE ECONOMIC BURDEN AMONG PATIENTS WITH TREATMENT RESISTANT DEPRESSION IN US CLAIMS DATA

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OBJECTIVES: Major depressive disorder (MDD) that does not respond to 2 or more adequate antidepressant (AD) medication treatments is classified as treatment resistant depression (TRD). This study compares the total healthcare cost and resource utilization between patients with TRD and those with non-TRD MDD, using OPTUM Clinformatics™. **METHODS:** This retrospective cohort study included patients of age ≥ 18 years old who received antidepressants (AD) between 01/01/2013-09/30/2014. The index date for the study was defined as the first dispensing of AD. All patients were required to have no AD pharmacy claims 6 months prior to the index date and have an MDD diagnosis within 30 days of the index date. TRD patients were matched with non-TRD MDD patients using the greedy approach at 1:4 ratio on the propensity score using baseline characteristics such as age, sex, anxiety and diagnosed comorbidities. The annual total healthcare costs included medical and pharmacy costs to payors and direct costs to patients. Cost outcomes were compared between TRD vs non-TRD MDD patients, using a generalized linear model on the matched patients. Results were obtained by averaging 1000 repetitions of the bootstrapping. **RESULTS:** The analysis included 2370 TRD and 9289 non-TRD MDD patients. Patients in the TRD cohort had a higher total healthcare costs than non-TRD MDD in both years 1 and 2: with differences of (95% confidence intervals) US$3845 (2855, 4928) and US$2411 (1217, 3713) and higher costs to both payors and patients. The TRD patients were more likely to be hospitalized with odds ratio (95% CI) 1.73 (1.46, 2.05) in year 1 and 1.43 (1.19, 1.73) in year 2, and had a higher frequency for outpatient visit and emergency room visit. **CONCLUSIONS:** TRD is associated with significantly increased total healthcare cost and resource utilization compared to non-TRD MDD in this US commercially insured cohort.

PMH23
PREDICTORS OF ALL-CAUSE HEALTHCARE PAYMENTS AMONG PATIENTS WITH TREATMENT-RESISTANT MAJOR DEPRESSIVE DISORDER

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OBJECTIVES: Treatment-resistant depression (TRD), defined as episodes of major depressive disorder (MDD) that do not respond to at least 2 lines of adequate depression therapy, is associated with a high economic burden. Limited information exists concerning predictors of healthcare payments following TRD identification. **METHODS:** This retrospective cohort study used data from the Truven Health MarketScan Commercial and Medicare Supplemental Databases (10/1/2008-9/30/2016). Patients with TRD were ≥18 years old, newly-diagnosed with MDD (≥1 inpatient admission or ≥2 outpatient visits with a primary or secondary MDD diagnosis), and newly treated with at least 3 courses of depression therapy (initiation of third course served as the TRD index date). Cohort study patients were continuously enrolled from a 12-month baseline period prior to the first course of therapy through a 12-month follow-up period after their TRD index date. Study measures included annual total all-cause healthcare payments (2016 USD) during the follow-up period. Adjusted TRD follow-up payments were estimated using a generalized linear model, controlling for demographics, baseline comorbidities, baseline resource use, and first-line class of therapy. **RESULTS:** TRD patients (n=1,112) had a mean (SD) age of 38.8 (14.1) and 60.6% were female. Mean (SD) total annual all-cause healthcare payments were $10,161 ($34,275) per patient in the TRD follow-up period, of which 34% ($3,423 [$5,817]) were outpatient payments. In multivariate modeling, younger age (18-24, 25-34, 35-44, 45-54, 55-64 vs. 65+), baseline obesity and pain, higher Charlson comorbidity score (2, 3+ vs. 0), and baseline resource use (ED visit, other visit, outpatient visit) were associated with significant increases in annual all-cause healthcare payments during the follow-up period (all P<.05). **CONCLUSIONS:** Annual all-cause healthcare payments in the 12 months following third-line therapy initiation can be substantial, particularly for younger adult TRD patients with obesity or pain-related diagnoses. Efforts to reduce this economic burden are warranted.

PMH24
HEALTHCARE COSTS ASSOCIATED WITH HYPERPROLACTINEMIA IN THE UNITED STATES

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OBJECTIVES: To assess the incremental healthcare costs associated with hyperprolactinemia among patients receiving antipsychotics. **METHODS:** Commercially insured adults were identified from the Truven Commercial US claims database (2006Q1–2016Q3). For patients with hyperprolactinemia (hyperprolactinemia cohort), the index date was defined as 14 days before the first hyperprolactinemia indicator (hyperprolactinemia, amenorrhea, galactorrhea, gynaecomastia, hypogonadism, prolactin assay, mammary ductogram/galactogram). For patients without hyperprolactinemia (hyperprolactinemia-free cohort), the index date was selected so that patient characteristics at that date matched the characteristics of the matched patients in the hyperprolactinemia cohort (i.e., demographics, antipsychotic treatment history, comorbidities, and mental-health medical services). Both cohorts were treated with antipsychotics within 12 months before index date. Costs from a payers' perspective were compared between cohorts during the 6-month period following index date and were annualized. Analyses were replicated among Medicaid-insured patients. **RESULTS:** For each cohort, 499 patients were identified, mean age was 39 years, and 77% were female. Compared to the hyperprolactinemia-free cohort, the hyperprolactinemia cohort was associated with incremental total healthcare costs of $8,197 ($21,522 vs $13,325; p<0.01), and incremental medical costs of $6,124 ($14,549 vs $8,425; p<0.01), which were mainly driven by hyperprolactinemia-related ($3,933 vs $222; p<0.01) and mental health-related ($7,043 vs $3,495; p=0.01) costs, accounting for 61% and 58% (not mutually exclusive) of the medical costs difference, respectively. All-cause inpatient costs were an important contributor of the medical cost difference, representing 40% of difference between cohorts ($5,234 vs $2,807; p=0.03). Similar findings were observed in Medicaid-insured patients (N=257 in each cohort); the hyperprolactinemia cohort was associated with incremental total healthcare costs of $12,212 ($32,459 vs $20,246; p<0.01), and incremental medical costs of $10,782 ($22,757 vs $11,975; p<0.01) compared to the hyperprolactinemia-free cohort. **CONCLUSIONS:** Hyperprolactinemia is associated with important healthcare costs. Therapeutic options with low/no impact on prolactin levels may contribute to reduce the hyperprolactinemia burden.

PMH25
REDUCED RISK OF HYPERPROLACTINEMIA AMONG PATIENTS TREATED WITH ATYPICAL ANTIPSYCHOTICS THAT ARE ASSOCIATED WITH LOW OR NO PROLACTIN ELEVATION

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