at week 6, the functional remission rate was similar for participants receiving lurasidone 30-60 mg and lurasidone 80-120 mg (41.6% and 46.0%, respectively). Controlling for baseline SDS total score and study center, the adjusted odds ratio for functional remission among participants receiving lurasidone versus placebo was 3.96 (p<0.01, 95% CI [7.2, 9.13]) in the 20-60 mg lurasidone group and 2.46 (p<0.01, 95% CI [4.33, 14.44]) in the 80-120 mg lurasidone group.

CONCLUSIONS: This post-hoc analysis of a lurasidone pivotal trial showed statistically significant improvement in functional remission within 6-week study duration among patients with bipolar depression treated with lurasidone compared to placebo.

PMH10
SYSTEMATIC REVIEW OF LONG-ACTING INJECTABLES (LA) VERSUS ORAL ATYPICAL ANTIPSYCHOTICS (OA) ON HOSPITALIZATION IN SCHIZOPHRENIA
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OBJECTIVES: The current study aimed at assessing the impact of LAIs versus OAs on hospitalizations among patients with schizophrenia by conducting a thorough systematic review of studies with different study designs and performing a meta-analysis.

METHODS: Using the PubMed database and major psychiatric conference proceedings, a systematic literature review for 01/2000-07/2013 was performed to identify English-language studies evaluating schizophrenia patients treated with atypical antipsychotics. Studies reporting hospitalization rates as a percentage of patients hospitalized or as the number of hospitalizations per person-year were selected. A meta-analysis of the percentage decrease in hospitalization rates from baseline during treatment was conducted as a primary analysis. The secondary analysis was performed on the absolute difference in hospitalization rates due to follow-up. Pooled treatment-effect estimates were calculated using random-effect models. To account for differences in patient and study-level characteristics between studies, meta-regression models were used. Subsets were further explored after homogeneity across study designs. No adjustment was made for multiplicity.

RESULTS: Fifty-eight studies evaluating 25 LAIs (13 arms, 4,516 patients; OAs: 12 arms, 23,946 patients) met the criteria for inclusion in the primary analysis and (4,481 patients; OAs: 13 arms, 66,923 patients) in the secondary analysis were identified. Reduction in hospitalization rates for LAIs was 20.7 percentage points higher than that of OAs (random-effect estimates: LAIs=56.2% vs OAs=35.5%, P=0.023). Controlling for patient and study-level confounders, the adjusted percentage reduction in hospitalization rates for LAIs was observed (random-effect estimate: -8.6, 95%CI: -18.1-1.0, P=0.027) as for the secondary analysis, no significant difference between LAIs and OAs was observed (random-effect estimate: -8.6, 95%CI: -18.1-1.0, P=0.07). Subsets analyses across type of study yielded consistent results.

CONCLUSIONS: Results of this meta-analysis including studies with both interventional and non-interventional designs and using meta-regressions, suggest that LAIs significantly reduce hospitalization rates for schizophrenia patients compared to OAs.

PMH11
THE TRADEOFF BETWEEN INTERNAL AND EXTERNAL VALIDITY IN COMPARING THE EFFECTIVENESS OF TRANSCRANIAL MAGNETIC STIMULATION (TMS) WITH ANTIDEPRESSANT DRUG THERAPY IN THE TREATMENT OF MAJOR DEPRESSION USING PROPENSITY SCORE METHODS
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OBJECTIVES: Transcranial magnetic stimulation (TMS) is FDA cleared for use in pharmacologically resistant major depression. Two sham-controlled trials reported efficacy and safety. However, TMS has not been directly compared to pharmacotherapy. Propensity score matching was used to compare the effectiveness of TMS to pharmacotherapy. Prospectively collected data were analyzed from a pragmatic study of 305 patients. The study included patients with TMS and patients treated withive treatments.

METHODS: Logistic regression models and 1:1 greedy matching algorithm. An unequal drug resistance distribution in the two populations allowed only 222 patients to match well on the first attempt. A subsequent re-matching of the remaining TMS subjects to the full STAR*D control population was performed to produce a complete match. This “double-dipping” approach enabled a successful complete match for all 305 TMS patients.

RESULTS: The matched STAR*D and TMS populations were similar at baseline. QIDS-SR outcomes at 6 weeks showed that the TMS group had a greater clinical improvement (P<0.0001). At 6-weeks 73% of TMS patients had no or mild depression versus 38% for STAR*D (p=0.0023). Sensitivity analysis was used to estimate the potential effects of any remaining selection bias factors, and confirmed an unlikely impact on results.

CONCLUSIONS: The varying distribution of the severity of baseline treatment resistance between the TMS and STAR*D populations made it impossible to achieve a complete match in the first matching attempt. Subsequent, “double-dipping” allowed tight matching on baseline variables. We accepted the risk to internal validity posed by the remaining selection bias confounding and the small impact to variability due to non-independence, in exchange for gaining an increased external validity for this difficult to match group. Matching hard-to-match groups requires a trade-off between risks to internal and external validity.

PMH12
BENEFITS OF A PATIENT-ASSISTED MEDICATION ADHERENCE PROGRAM FOR LONG-ACTING INJECTABLE Risperidone ON HIGH-COST OUTCOMES IN SCHIZOPHRENIA

OBJECTIVES: Poor adherence to antipsychotics in schizophrenia is common and associated with increased risk of hospitalization. An adherence program (AP) was associated with a greater risk of hospitalization for schizophrenia patients admitted to patients applied PAMAP to ≥50% of injections. Adherent patients received ≥80% of their injections within 5 days of the scheduled date. Otherwise, patients and centers were non-adherent. Poisson regression was used to derive rates (RR) comparing hospitalization rates across treatment sites among adherent and non-adherent patients and centers. Propensity scores were used to derive adjusted RRs.

RESULTS: Of 506 recruited patients, 95.7% were followed up to 1 year (average age: 38.7; 64.6%; 60.4% hospitalized in the previous year). Overall hospitalization rate over follow-up was 32.5% per person-year. Fifteen centers treating 243 patients and 21 centers treating 263 patients were adherent and non-adherent, respectively. Lower hospitalization rates were associated with PAMAP (crude RR: 0.64 [95% CI 0.44-0.93]; adjusted RR: 0.78 [95% CI 0.47-1.27]). Nearly 75% of patients were adherent but adherence was not associated with disease severity nor with reduced hospitalization rates. The effect of PAMAP on hospitalization rates was greater among non-adherent (adjusted RR: 0.45 [95% CI 0.36-1.28]) than adherent patients (adjusted RR: 0.98 [95% CI 0.51-1.53]).

CONCLUSIONS: Adherence among schizophrenia patients partaking in a PAMAP for LAIR was high. PAMAP may reduce psychiatric hospitalization risk for schizophrenia patients with problems adhering to long-acting injectable atypical antipsychotics treatment regimens.

PMH13
EVALUATING THE IMPACT OF CANNABIS USE ON METABOLIC SYNDROME USING DATA FROM THE CONTINUOUS NATIONAL HEALTH AND NUTRITION EXAMINATION SURVEY
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OBJECTIVES: Cannabis is the most commonly used illicit substance in the United States. Usage rates have climbed in recent years, underscoring the need for knowledge about cannabis use on factors associated with metabolic health problems, such as heart disease and diabetes mellitus. Some studies suggest that cannabis use is associated with improvements in weight, BMI, and insulin resistance; however, other studies have reported no significant association with BMI, waist circumference, and blood pressure. These relationships were first estimated with ordinary least squares (OLS) models. Next, instrumental variables (IV) methods were utilized to test and account for the potential endogeneity of cannabis use as an instrument for current use. The second used past cannabis use as an instrument for current use.

RESULTS: OLS models show lower fasting insulin, insulin resistance, BMI, and waist circumference in past cannabis users compared to never users; however, none of the studies had controlled for potential confounding variables. The first IV model, the coefficients on cannabis use are mostly non-significant. When past cannabis use is an instrument for current use, the results for fasting insulin, insulin resistance, and BMI were significant and in the opposite direction from the OLS results. Durbin-Watson-Hausman tests provide evidence of endogeneity of cannabis use for some outcomes.

CONCLUSIONS: Models of the relationship between cannabis use and health should account for endogeneity. Results of two-stage least squares estimation are inconsistent with OLS results, challenging the robustness of findings that indicate a positive relationship between cannabis use and fasting insulin, insulin resistance, BMI, and waist circumference.

PMH14
RISK OF PSYCHOSEXUAL DYSFUNCTION BETWEEN USERS OF SELECTIVE SEROTONIN REUPTAKE INHIBITORS AND SEROTONIN NOREPINEPHRINE REUPTAKE INHIBITORS
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OBJECTIVES: Newer antidepressants selective serotonin reuptake inhibitors (SSRIs) and serotonin norepinephrine reuptake inhibitors (SNRIs) are the most commonly prescribed antidepressants. This is due mostly to their better side effect profile when compared to older drugs like tricyclic antidepressants (TCAs). However these classes are not completely bereft of side effects. Psychossexual dysfunction is a condition that occurs commonly among depressed patients. It has been shown to be associated with antidepressant. The objective of our study is to perform a comparative analysis of the incidence of psychosexual dysfunction between TCAs, SSRIs, and SNRIs.

METHODS: We used a cohort study design in an administrative claims database (2006-2013 Lifelink claims data) to compare the incidence of psychosexual dysfunction in TCAs, SSRIs, and SNRIs. The database was reported from a large managed-care organization. The hazard model was used to assess the risk of adverse events while adjusting for potential confounders.

RESULTS: A total of 269489 patients with an incident prescription for TCAs, SSRIs or SNRIs were identified and met the study inclusion criteria. They constituted a total of 682,657 person years. The unadjusted hazard ratio of incidence of psychosexual dysfunction in patients on SSRIs compared to SSRIs was 1.625 (1.506-1.755). The results were consistent after adjusting for various covariates using the time-varying hazard ratio model. For TCAs, the hazard ratio was 1.429 (1.323-1.545) and for the reduced model with covariates identified using stepwise regression was 1.431(1.325-1.546). The directionally of covariates adjusted for the analysis was consistent with current literature. CONCLUSIONS: SSRIs were associated with a greater risk of psychosexual dysfunction than SNRIs.