months from index date were identified. ADs were categorized as tricyclic antidepressants (TCAs), selective serotonin reuptake inhibitors (SSRIs), and new antidepressants (NADs). The adherence measures of AD therapy include 90-day medication possession ratio (MPR, <5% as nonadherent), persistence (duration of uninterrupted therapy >90 days with no apparent gap), and switching of AD class within 180 days were used. Relapse was defined as hospitalization or emergency department visit due to depression, suicide attempts, or readmission of AD therapy after at least 6 months from previous AD treatment. Cox proportional hazards model was used to estimate risk ratios of relapse with 95% confidence intervals for each adherence measure. RESULTS: A total of 88,079 patients satisfied the selection criteria, among which mean age of 45.2 years and 67.3% of women. Overall relapse rate was 29.5%. Adherence (MPR<75%) or persistence (duration of uninterrupted therapy >90 days) showed increased risk of relapse (aHR=0.990;97.1-1.02) and 1.010;97.1-1.04), respectively. Patients who switched AD class within 180 days showed increased risk of relapse (aHR=1.18[1.15-1.21]). CONCLUSIONS: Various definitions of adherence led to different estimates of relapse rate. Diverse aspects of adherence should be considered when studying the association between the medication adherence and clinical outcomes.

PMH84

PERFORMANCE OF TWO INSTRUMENTAL VARIABLES TO EVALUATE THE RISK OF DEATH IN DUAL ELIGIBLE ELDERLY NURSING HOME RESIDENTS USING ANTIPSYCHOTIC AGENTS
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OBJECTIVES: To evaluate the performance of two instrument variables, namely physician and nursing home facility preference, to examine the risk of death in dual eligible elderly nursing home residents using antipsychotic agents.

METHODS: A retrospective cohort design involving dual eligible nursing home residents 65 years and above was used. An instrumental variable analysis was conducted to evaluate the risk of mortality within 180 days of antipsychotic exposure. Sensitivity analysis was conducted without the instrumental variable (IV). We compared the risk of death among patients who received antipsychotic prescription initiated by the physician. Nursing home facility preference was defined as the most frequently initiated antipsychotic agent in the nursing home. The performance of each instruments was evaluated based on the strength of association, covariate balance, and explanatory power in addition to endogeneity tests. The risk of death was modeled using extended Cox Proportional Hazard model based on two-stage residual inclusion method for instrumental variable analysis.

RESULTS: Physician preference (Odd Ratio [OR] 3.97) and nursing home facility preference (OR 4.54) were strongly associated with antipsychotic use. The explanatory power in the multivariate models and covariate balance in the preference groups were similar with both instruments. Instrumental variable analysis involving physician preference, however, did not meet the criteria for endogeneity (Wu-Hausman F = 1.49, P = 0.22). Using nursing home facility preference as an instrument, the extended Cox model revealed that risk of death is greater among typical antipsychotic users in the initial 40 days [Hazard Ratio (HR) 2.76, 95% CI 1.13-6.32] but decreases after 40 days [HR 1.44, 95% CI 1.10-1.88] when compared to atypical users. CONCLUSIONS: Nursing home facility preference appears to be valid instrument in the nursing home population. Evaluation of instruments is critical in implementing instrumental variable analysis for pharmacoepidemiology research.

PMH85

A SCHIZOPHRENIA OR BIPOLAR TYPE I DISORDER REGISTRY: LESSONS LEARNED FROM CONDUCTING A REGISTRY STUDY WITH SAFETY NET PROVIDERS
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OBJECTIVES: Registries are increasingly used to collect information on effectiveness of new medications in real-world practice settings. Conducting a registry study focused on providers who treat vulnerable populations and have limited research experience can present unique challenges. The Research and Evaluation staff from REACH OUT Registry is a naturalistic, longitudinal study of patients receiving primary treatment at community behavioral health organizations (CBHOs) to provide information on paliperidone palmitate, risperidone long-acting therapy, and other antipsychotics. This study evaluates the challenges faced from the REACH OUT study. METHODS: REACH OUT recruits patients with schizophrenia or bipolar type I disorder from multiple CBHOs in the United States. Patients are identified by treating clinicians and screened by research coordinators to determine eligibility. A Web-based data collection tool is used to enter data obtained from patient self-reports, interviewer/clinician assessments, and medical records abstraction. Patients will be followed for 1 year with assessments at baseline, 6 months, and 12 months. RESULTS: Lessons learned thus far are 1) the value of early contact with the provider member organization to recruit sites; 2) the need for buy-in from site management; 3) the importance of identifying dedicated staff committed to research endeavors; 4) the importance of selecting instruments that balance data collection burden and the desire for a variety of outcome measures; 5) benefits of vetting the draft protocol with potential sites to assess feasibility; and 6) the importance of working with sites to address individual needs (e.g. local internal review board approval). CONCLUSIONS: Registry studies focusing on patients treated by safety net providers, often with limited research experience, require unique considerations. Working closely with sites up-front and obtaining ongoing input from site management and research staff have been crucial to REACH OUT thus far.

Neurological Disorders – Clinical Outcomes Studies

PDN1

PRESCRIBING PATTERNS OF DRUGS HAVING ANTICHOLINERGIC ACTIVITY IN PATIENTS WITH ALZHEIMER’S DISEASE
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OBJECTIVES: Co-prescription of anticholinergic drugs with the traditional cholinesterase inhibitors is not recommended. Yet the extent of anticholinergic drugs use is unknown. Conversely, the prescription of anticholinergic drugs is not contraindicated with the N-Methyl-D-Aspartic acid (NMDA) receptor antagonist. This study evaluates the prescribing patterns of drugs having anticholinergic activity in patients with AD above the age of 65 years were analyzed from NNHS line, 6 months, and 12 months. The PHQ-4 was observed to be a valid instrument in the nursing home population. Evaluation of instruments is critical in implementing instrumental variable analysis for pharmacoepidemiology research.