OBJECTIVES: Substantial evidence suggests that following an enhanced recovery after surgery (ERAS) program is effective in improving post-surgical outcomes. To examine the potential associations between two ERAS protocols (preoperative fast, post-operative fluid, opioid use, hospital costs, and readmissions), would require combining data elements from the ERAS program with regularly collected retrospective data elements in a large multi- regional database. This study was conducted in this setting from a retrospective dataset with a matched retrospective data source.

METHODS: Duke University Medical Center (DUMC) collected data on colorectal surgery patients in order to determine eligibility for inclusion in the study. With IRB approval, we matched selected patients in the Premier research database on criteria of age, gender, discharge date, procedure date, length of stay, presence of a colorectal procedure during stay, and presence of a colorectal procedure. All matched were performed in the Premier database.

RESULTS: Of the DUMC patient database, 206 (85.8%) matched on all variables. One other patient matched, except on having a colorectal procedure on an identical date. Thirteen (5%) patients were matched on only one variable. One patient matched on all four variables.

CONCLUSIONS: Using the different matching approaches, we were able to link nearly all patients from the DUMC prospective database to the Premier retrospective dataset. This flexible system can be utilized with other databases.

PMR61
EVALUATING THE EMILIA-ROMAGNA REGION DATABASE FOR INVESTIGATING TREATMENT OUTCOMES: THE CASE OF ANTIPSYCHOTICS AND MORTALITY

Sabina F, Massimo MP, Gagge F, De Palma R, Mainardo M
Thomson Jefferson University, Philadelphia, PA, USA, ‘Regional Health Care Agency, Emilia-Romagna, Bologna, Italy, ‘Brigham and Women’s Hospital and Harvard Medical School, Boston, MA, USA

OBJECTIVES: To evaluate the use of the population-based Emilia-Romagna region (RER) administrative database for drug outcomes studies using as an example the previously documented increased mortality risk amongst new users of conventional versus atypical antipsychotic medications.

METHODS: We conducted a new user cohort study among 29,841 Italian RER patients aged 65 or older who initiated treatment with a conventional or atypical antipsychotic between July 1, 2009 and June 30, 2011. The 180-day mortality was compared for patients in treatment groups using Cox proportional hazards models that were adjusted for mortality risk factors, including demographic and clinical characteristics, use of other medications, and measures of health services utilization intensity, all measured prior to antipsychotic initiation. We conducted a systematic review and meta-analysis of studies with similar methods against which we compared our results. RESULTS: Amongst 14,462 patients prescribed conventional and 9,212 prescribed atypical antipsychotics, we observed 2,402 deaths during follow-up, respectively. New users of conventional antipsychotics were older and generally had higher prevalences of outcome risk factors and higher health service use intensity at baseline. The crude hazard ratio (HR) was 1.95 (95% confidence interval [CI], 1.80-2.15), which decreased to 1.47 (95% CI, 1.35-1.60) after full adjustment. We identified seven published studies examining this association using similar methods. The pooled HR from these seven studies was 1.34 (95% CI, 1.28-1.39). Upon inclusion of our study, the meta-analysis yielded a summary estimate of 1.45 (95% CI, 1.41-1.50) without introducing any heterogeneity (I^2 = 0%; p=0.455).

CONCLUSIONS: Our results support the findings of previous studies and provide a refined estimate of the mortality risk between conventional and atypical antipsychotics. Further research is needed to determine whether conventional versus atypical antipsychotics.

Our study supports further development of the RER database for pharmacoepidemiology studies.

PMR62
UTILIZING PHARMACY RETAIL DATA TO MEASURE PRIMARY MEDICATION NON-ADHERENCE

Jackson E, McCaffrey DJ, Bentley JP, Pace FF, Holmes ER, Joshi N, Porter J, Weisstrum D
1University of Mississippi, University, MS, USA, 2University of Mississippi, University, MS, USA, 3AstraZeneca Pharmaceuticals LP, Wilmington, DE, USA, 4Brigham and Women’s Hospital and Harvard Medical School, Boston, MA, USA

OBJECTIVES: The purpose of the study was to calculate primary medication non-adherence (PMN), using the Pharmacy Quality Alliance’s (PQA) quality measure with retail pharmacy transaction data. Primary non-adherence is an instance whereby patients fail to initiate a pharmacotherapy regimen following a prescription order by a physician (new order rejection, non-adherence).

METHODS: De-identified, pharmacy transactional data for calendar years 2010 and 2011 from 100 pharmacies of a pharmacy grocery chain were used. Primary non-adherence was defined as a prescription filled as prescribed for a patient age 18 or older, but was not obtained from the pharmacy within 30 days. A set list of chronic medications was constructed that would without patient needing pick-up medication up in a timely manner to begin therapy. Additionally, only electronic prescriptions were assessed as the data captured for prescription origination date and medication pickup date could not be genuinely accounted for in paper prescriptions. A prescription was considered if the medical condition (generic equivalent) had not been filled for the patient by the pharmacy during the prior 180 days.

If the prescription was deemed to be a newly initiated drug therapy, it was included in the denominator for the measure. The numerator was populated when a newly initiated drug therapy or its therapeutic equivalent was not filled.