RESEARCH ON DATABASE METHODS STUDIES

DB1 CRITICAL PROBLEMS OF CODING DATA IN HEALTH CARE: OBESITY, SMOKING, AND ALCOHOL USE BY METHOD OF MEASUREMENT. Al Kazzi ES1, Lau B1, Li T2, Schneider EB1, Makary MA1, Hutfless S1

OBJECTIVES: There is a strong relationship between obesity, smoking, and alcohol use and economic burden. However, these factors are typically measured by different methods, and there have been few studies comparing methods. Therefore, the objective of this study was to compare the prevalence of obesity, overweight, smoking, and alcohol use between two larger claims databases: commercial claims database (coverage of >200 million enrollees) and a direct survey in the Behavioral Risk Factor Surveillance System (BRFSS) in 2011. The national and state estimates and the Pearson correlation coefficient for obesity, overweight, smoking, and alcohol use were calculated. RESULTS: Compared with direct participant questioning in BRFSS, NIS reported substantially lower prevalence of obesity, overweight, smoking, and alcohol use. The prevalence of obesity, overweight, smoking, and alcohol were 27.7%, 35.8%, 20.1% and 18.3% in direct survey and 9.6%, 0.21%, 12.2% and 4.6% in NIS. The correlation between NIS and direct survey was 0.27 for obesity (p=0.06), 0.09 for overweight (p=0.53), 0.62 for smoking (p<0.01) and 0.40 for alcohol (p=0.03). CONCLUSIONS: The prevalence of smoking and alcohol use based on ICD-9-CM codes in NIS is not consistent with prevalence rates by direct questioning. Patient-level data extraction as a part of Meaningful Use standards, rather than ICD-9-CM codes, would improve the accuracy of these important outcomes in NIS. Ensuring accuracy of important comorbidities is critical to quality improvement efforts and healthcare policy reforms that are based on measuring risk-adjusted outcomes.

DB2 A NEW METHOD FOR COUNTING HEMOPHILIA-RELATED BLEEDING EVENTS IN CLAIMS DATA. Sherehza A1, Eidar-Lissai A2, Wu Y1, Bart K1, Krishnan S3, Lakdawalla D4

OBJECTIVES: Hemophilia-related bleeding events are difficult to quantify. Insurance claims data may capture the information, but there is no robust methodology to identify potential event inflators. METHODS: Using 2004-2012 Truven Health MarketScan commercial claims database (coverage of >30 million enrollees in the United States), we evaluated males under age 65 having ≥1 hemophilia A or B (ICD-9 286.0, 286.1), and ≥1 pharmacy claim for clotting factors taken within a 10-day window (hemophilia A: 2.21 (range: 1-31), hemophilia B: 1.81 (1–14)) and 14-day window (hemophilia A: 2.21 (1-31), hemophilia B: 1.81 (1-14)) and 14-day window (hemophilia A: 2.10 (1-24), hemophilia B: 1.69 (1-24)). A 1-day window produced somewhat higher numbers (hemophilia A: 2.99 (1-66), hemophilia B: 2.72 (1-43)), but pairwise rank correlation remained high across the four assumptions produced somewhat higher numbers (hemophilia A: 2.99 (1-66), hemophilia B: 2.72 (1-43)). Claims data can be utilized to construct stable, robust indices of bleeding events in hemophilia patients, permitting reliable studies of factors influencing bleeding frequency and healthcare burden.

DB3 THE IMPLICATIONS OF USING A 30-, 60-, OR 90-DAY GAP IN TREATMENT TO SPECIFY LINE S OF CARE IN GASTRIC CANCER TREATMENT. Seal B1, Shermock KM2, Schouten EB1, Ajani JA1

OBJECTIVES: Several large integrated claims databases (Pharmatracx, MarketScan) spanning July 2008 to September 2012 were used to identify patients ≥18 years old diagnosed and treated for GaCa. Patients were required to be continuously enrolled for ≥1 year, and to have ≥6 months of follow-up. Eligible patients were stratified into cohorts based on the presence and timing of metastasis (M) diagnosis: no metastasis (NM), ≤120 days (M1), and >121 days (M2). Treatment gap intervals were varied at ≥30, ≥60 and ≥90 days to indicate the start of a new line of chemotherapy (C). There were 6,509 (NM), 2,004 (NM), 875 (M1), and 324 (M2) patients in each of the databases meeting all inclusion criteria. Comparing the 30- and 90-day gaps, mean length of treatment (days) increased for M1 patients from 69.8-71.0 to 83.4-84.5 in first, 55.4-56.6 to 57.5-60.3 in second, and 54.3-59.7 to 60.1-64.9 in third line. Using a 30-day gap, 46.4%-54.2% of M1 and 36.1%-46.6% of M2 received second line while 25.6%-32.3% of M1 and 18.2%-25.1% of M2 received third line. The prevalence of discontinuation was ≥1% for M1 and ≥5% for M2. The rate of third-line therapy was similarly lower at 23.0%-30.0% for M1 patients and 17.3%-23.2% for M2. Increasing from a 60-day to 90-day gap resulted in an even greater decline of overall discontinuation rates of 0.3%-3.1% in third line across both the M1/M2 groups. CONCLUSIONS: The data are in agreement in the 2 databases, and analysis by varying treatment gaps did not significantly impact results.

DB4 DEVELOPMENT AND VALIDATION OF ALGORITHMS TO IDENTIFY STATIN INTOLERANCE IN US ADMINISTRATIVE DATABASE. Toody JM1, Lamerato L2, Dalal M3, Sung JC1, Khan I1, Jhaerri M4, Koren A5, Schulman KL6

OBJECTIVES: To develop and validate an algorithm to define statin intolerance (SI) in an administrative database (AD). METHODS: Adults with ≥1 qualifying change in statin therapy and ≥1 prior diagnosis of hyperlipidemia, hypercholesterolemia, or mixed dyslipidemia were identified from the AD of the Health Alliances Plan at Henry Ford Health System (HFHS). A sample of 1000 patients was drawn from the pool of eligible adults using an 80/20 ratio of patients taking a moderate- to low-intensity statin or a high-intensity statin at the time of qualifying change in therapy. Statin utilization and adverse events data were abstracted from the AD and the FHHS electronic medical record (EMR). Patients were stratified by high or low cardiovascular risk based on comorbidities, and any SI was categorized as absolute (A) or titration (T). In both the AD and the EMR, identification of SI was based on statin treatment patterns and potential statin-related adverse events. With EMR as the reference, measures of concordance (Cohen’s kappa [κ] and accuracy, sensitivity, specificity, positive and negative predictive value (PPV, NPV)) were reported for AD algorithms. RESULTS: In the sample population (n=990), any SI was identified in 11.5% and 14.0%, A1 in 2.2% and 3.1%, and T1 in 9.7% and 11.8% of patients in the EMR and AD, respectively. The algorithm identified from any SI with stage T1 or T2 invasive breast cancer from 2010-2011. Patients were stratified using rosiglitazone. After the warning, the numbers were 17% to 19%, 30% to 32% (without adding another oral medication), and how these responses differ by patient group. CONCLUSIONS: A comprehensive, easy-to-implement, and valid SI algorithm from an AD is available for real-world research.

HEALTH CARE MANAGEMENT STUDIES

HH1 UTILIZATION OF ANTIDIABETICS AFTER FDA SAFETY ANNOUNCEMENTS. Ding Y1, Gascue L1, Liu Y2, Ning N3, Joyce C1

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OBJECTIVES: FDA-issued safety alerts and warnings play a vital role in post-market drug surveillance. We examine the effects of the FDA safety announcements for rosiglitazone and pioglitazone on the utilization of these drugs and other oral antidiabetics. METHODS: Two large integrated claims databases from the FDA MedWatch database to Medicare drug claims (Parts D & B) from 2006 to 2010. We examine the timing, direction and level of demand responses to safety announcements, and how these responses differ by patient group and plan type. RESULTS: The demand for rosiglitazone was plummeted after the second safety alert (in May 2007), and decreased further after a (black box) warning was issued (in August). After the alert, 27% to 28% of rosiglitazone users switched to another oral antidiabetic (predominantly pioglitazone) within 6 months of the alert depending on patient groups and plan type; 28% to 33% discontinued use of rosiglitazone, but did not add another oral antidiabetic; 38% to 44% continued using rosiglitazone. After the warning, the numbers were 17% to 19%, 30% to 32% and 49% to 52% respectively. Discontinuation rates were slightly higher among Hispanics (32%) and those in MA-Plan groups (32%). In contrast, the demand response for pioglitazone was more muted, while it increased slightly after the warning (in August). CONCLUSIONS: The demand response to safety warnings for rosiglitazone was large and abrupt, and a substantial fraction of those who stopped did not replace it with another oral antidiabetic. The demand response was fairly consistent across race/ethnicity, socioeconomic status, and plan type, although large responses raise concern about adverse health consequences.

HH2 DIFFERENCES IN MASTECTOMY RATES BASED ON HORMONE RECEPTOR STATUS IN EARLY STAGE TUMORS: A SEER DATABASE ANALYSIS. Hingard L1, Schwartz T2

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OBJECTIVES: Breast cancer molecular subtypes provide important prognostic information that is useful for determining adjuvant treatment strategies; however, there is no evidence to indicate molecular subtypes should influence choice of surgical treatment. The purpose of this investigation was to test for differences in mastectomy (TM) versus lumpectomy (BCT) for each stage subgroup based on hormone receptor status. METHODS: The SEER registry was queried for all females ages 15 – 85 diagnosed with stage T1 or T2 invasive breast cancer from 2010-2011. Patients were stratified by T-stage and race. Logistic regression was used within each stratum to compare...