within 30 days of the prescription’s origination date. RESULTS: Using the PQA-developed PMN measure, these 100 pharmacies had an overall PMN rate of 9.3%. The measure could be calculated using the pharmacy transaction data, however, some pharmacies (e.g., a pharmacy that only dispenses one type of drug) had to make adjustments. CONCLUSIONS: Retail pharmacy data can be used to measure quality indicators, like PMN. These measures will have limitations, as do other quality indicator measures.

PRM63
USING CLAIMS DATA-BASED SENTINEL SYSTEM TO IDENTIFY DRUG SAFETY AND OUTCOMES ISSUES: METHODOLOGY AND RESULTS OF ANALYSIS ON FIVE MILLION LIVES

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OBJECTIVES: We present the methodology for a near-real-time Pharmacovigilance & Drug Safety System (PDSS) to detect relationships between indications, drugs and outcomes. Combinations are user-selectable from a library of clinical scenarios including indications, agents and outcomes. Exemplary results for drug-outcome pairs from the PDSS are illustrated.

METHODS: Deidentified claims data for five million individuals covering a 12-month span was analyzed. A ‘Heat-Map’ was generated with relative risk (RR) for combinations of 73 DDCs and 39 HOs. Clinical indications (on- and off-label), presence of drug, and outcomes were identified as, respectively, 1) ICD-9 claim(s), 1) NDC codes for a drug refill, and outcome code present in months 6-12 but not in month 1-6. RR and Chi-Squared were calculated for every combination (SAS 9.3). RESULTS: PDSS generated 47,319 indication-drug-outcome combinations. Run time was less than 48 hours. At a nominal threshold of 0.05, at least 5 unique patients chi-square (X²) value of over 5, 13,094 (28%) of the combinations were identified for further inspection. Example results included: GERD-PPI-Bleeding:0.648 (X²=139); GERD-PPI-Fracture:1.42(x2=11.1); Hypertension-AACE-2006:8.6; Non-valvular Atrial fibrillation-Dabigatran-Bleeding 1.1(x²=0.2); Valvular Atrial fibrillation-Dabigatran-Bleeding.1.3 (X²=2.6); mechanical heart valve-dabigatran-stroke.8.76(x²=6.5). CONCLUSIONS: The PDSS rapidly quantifies indication–drug–outcome associations from real-world data. Such a system can provide prospective and continuous drug surveillance and comparative effectiveness & harms analysis. This can permit more efficient targeting of further analyses. Finally, the PDSS is constructed such that it is rapidly able to incorporate new indication, drug, and/or outcome data from claims or clinical (i.e. EMR) data sets.

PRM64
CONCORDANCE IN DIAGNOSIS OF DIABETES BETWEEN ELECTRONIC MEDICAL RECORDS AND CLAIMS DATA

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OBJECTIVES: To examine the concordance in diabetes diagnosis between electronic medical records (EMR) and claims data and to explore an appropriate definition for diabetes in EMR data. METHODS: Retrospective study using the Linked Quintile EMR and MarketScan Commercial and Medicare Databases (MSN). Patients with at least one EMR every year and continuous enrollment in MSN between 2009 through December 31, 2011 were included in the study. Patients with at least one inpatient or two outpatient claims for diabetes (ICD-9-CM 250.xx) in MSN were identified as diabetic patients. Diabetes was defined in the EMR data using various criteria, including HbA1c≥6.5%, diabetes in the problem list, any prescription, ≥2 oral anti-diabetic agents, and ≥2 abnormal fasting plasma glucose tests. An extended definition of diabetes based on the presence of any of the criteria mentioned above was also evaluated. RESULTS: 27,219 patients were identified in EMR, and 34,383 were identified as diabetic patients using MSN claims. When the extended definition was used, 27,219 patients were defined as diabetic in EMR, an 11.8% increase compared with those identified using the HbA1c≥6.5% criterion, and 2.35 times of those with a diabetes diagnosis in the problem list. Among patients with a diagnosis of diabetes, there were 30 days of the prescription’s origination date. RESULTS: Using the PQA-developed PMN measure, these 100 pharmacies had an overall PMN rate of 9.3%. The measure could be calculated using the pharmacy transaction data, however, some pharmacies (e.g., a pharmacy that only dispenses one type of drug) had to make adjustments. CONCLUSIONS: Retail pharmacy data can be used to measure quality indicators, like PMN. These measures will have limitations, as do other quality indicator measures.

PRM65
HOW DO PHARMACEUTICAL MARGINS VARY BY REGION, THERAPEUTIC AREA and claims. When linked EMR and claims data are used, the diagnosis of diabetes data and confirmed good concordance of the diabetes definition between EMRs specificity of the extended definition was 97.9%.

oncology drugs in various countries to the country gross domestic product (GDP).

we compared pharmaceutical margins for diabetic, multiple sclerosis and developing trends of medicine supply across the globe. To confirm any trends, we calculated the average distribution margins between ex-factory price and public price across countries, regions and therapy areas. We also compared distribution margins to GDP per capita (International Monetary Fund 2012) to investigate trends between the two parameters. The average analysis investigated two regions: Asia-Pacific and Europe, and two therapeutic areas: diabetes and oncology. We tested if correlation between distribution margins across regions and therapeutic areas. We found no correlation between the drug distribution margins and GDP aside from the Middle-East-African region, which showed a higher pharmaceutical margin in high GDP countries.

CONCLUSIONS: Our analysis shows that pharmaceutical margins vary the most between high GDP regions and therapy area with little correlation to the GDP per capita. Pharmaceutical distribution margins are higher in Asia-Pacific than in Middle-East-Africa, Europe and US.

PRM66
USE OF COMMON DATA MODEL TO MEANINGFULLY COMPARE TREATMENT PATTERNS FOR DEPRESSION AMONG DISPARATE DATABASES

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OBJECTIVES: To use a Common Data Model (CDM) to standardize data format across disparate databases, and augment computerized research methods across disparate data sources, producing meaningfully comparable results. This study compared treatment patterns for patients diagnosed with depression between 2008-09 across three comparable observational databases, after all source data was transformed into a CDM format. METHODS: Newly diagnosed depression patients were identified from 5 Administrative Claims and Electronic Health Record (EHR) databases, comprising ~300 million patients previously transformed into a CDM format. A ‘Heat-Map’ was generated with relative risk (RR) for 365 days immediately following initial treatment. RESULTS: SSRI’s were the most common first line treatment (72-75% across databases), followed by other antidepressants (12-17%). The patterns of continuation varied by type of database: Government Claims (5%), Commercial Claims (14-15%), EHR (32%). Discontinuation was consistent across all Claims (65-69%) with EHR lower (46%). Switching rate (12-14%) and specific patterns of switching were consistent across all databases. Augmentation rate was consistent across all databases (7-8%), with the exception Government Claims (13%). The pattern of augmentation was variable depending on type of database. FDC was consistent across Claims (25-28%) but varied from EHR (57%). On average across databases, TCAs had lowest FDC (25-28%) Claims, 57% EHR) while SNRIs had the highest (29-44% Claims, 53% EHR). Analysis was completed on all databases in less than two days.

CONCLUSIONS: Common Data Models provide an efficient way of enabling meaningful comparisons across disparate data sources. Differences in results are likely due to differences in underlying populations, data capture process, and/or functional ability and/or incentive to record complete information in source data.

PRM67
PREPARATION OF A HOSPITAL DATASET FOR ANALYSIS PRIOR TO A HOSPITAL AND HEALTH INSURER MERGER

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OBJECTIVES: To provide a source document in the creation of a dataset for a hospital and health insurer merger. METHODS: A review of the literature was performed to determine best practices in the development of a dataset to link hospital data with health insurance data. Peer reviewed articles and reports were retrieved from the published literature from 2002 to 2012. RESULTS: Results revealed a total of 30 articles and reports. A summary of this information is provided as a step-by-step guide on how to setup a dataset. The purpose of data collection should be discussed in detail. The data must be de-identified due to HIPAA regulations. Patient data, such as date of birth, hospital admission, discharge date, sex, and ICD-9 codes cannot be transformed to ensure that the variables are included in the dataset. CONCLUSIONS: Current databases that are stored as a separate dataset. Additionally, a dataset from the payer should be extracted and stored. The resulting datasets can then be sent to a Data Coordinating Center, where data is evaluated for quality assurance and combined into one master dataset. Prior tocombining datasets it is helpful to identify potential research outcomes of interest to ensure that the variables are accurately represented by the data set. Constructing a few relational databases that allow researchers to follow a patient from hospital admission to post discharge. Researchers who obtain data offering a cross sectional view of a patient’s health status must find creative ways to link patients over time either making many assumptions or using various simulation methods. A hospital and health insurer merger offers a unique opportunity to develop a dataset to track patient outcomes.

PRM68
SPONTANEOUS REPORTING DATA: A GLOBAL COMPARISON USING AN ONLINE DATABASE RESOURCE

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