the various shortcomings of such programs that were implemented before in order to provide a good program that has taken into consideration all the factors that are necessary for the economic delivery of healthcare without excluding the quality oriented approach. It will also act as a model for private insurance firms or other organizations to adopt such a model in order to produce better outcomes at lower costs in the future. Therefore, if this model is repeated over the average 3 year period it will be an economic solution to this problem of the unsustainable increase in healthcare costs of the US.

**PHPS5**

**ASSESSING THE AVAILABILITY OF DRUGS MARKETED IN THE US AND SWITZERLAND**

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OBJECTIVES: The availability of drugs in a market may affect patient care, health outcomes and costs. The objective of this study was to assess differences in the availability of human drugs marketed in the US and in Switzerland as of January 1, 2015.

METHODS: Information about all drugs approved in the US and Switzerland was derived from the database of the U.S. Food and Drug Administration (FDA) and the Swiss Agency for Therapeutic Products (Swissmedic) respectively. The list of drugs reimbursed by the Swiss mandatory insurance was extracted from the Federal Office of Public Health. Drugs were classified according to the WHO anatomical therapeutic chemical classification (ATC). Descriptive statistics and the chi-square test were performed. RESULTS: The FDA listed 2,491 different active ingredients and combinations (AICs) approved and marketed in the US, while the Swissmedic listed 1,345 AICs approved and marketed in Switzerland. Of these, 138 orphan AICs were listed by Swissmedic and 63.0% were included in the Swiss reimbursement list. Overall, 73.5% of the US AICs were listed by Swissmedic and 67% were reimbursed, while 29.8% AICs approved in Switzerland were not approved in the US. A statistically significant (p < 0.05) higher percentage of non-orphan AICs marketed in the US than orphan AICs were listed by Swissmedic. ATC codes were available for 94.6% of the US AICs and 91% of the AICs approved in Switzerland. This indicates that the ATC classification was the highest class with the highest proportion of US approved drugs marketed in Switzerland.

CONCLUSIONS: Two-thirds of the AICs marketed in the US were marketed in the Swiss market. Orphan drugs have less presence in the Swiss than in the US market. Future research should compare the approval processes in both countries and evaluate the impact of the availability of drugs on patients’ outcomes and costs.

**PHPS1**

**EVALUATION OF AUDIT SCORING CONSISTENCY IN A COMPREHENSIVE FEEDLOT MANAGEMENT SYSTEM AND CORRELATION WITH FEEDFARM PERFORMANCE BASED ON AVERAGE DAILY GAIN AND DRY FEED CONVERSION IN 11 US FEEDLOTS**

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OBJECTIVES: A comprehensive Feedlot Management System (FMS) was developed to optimize feedyard processes. The FMS consists of 43 Standard Operating Procedures (SOPs) that were developed to optimize feedyard processes. An integrated system was used for assessing the performance of a healthcare system and are quality indicators of patient care. This study examined the relationship between readmissions and patient outcomes for county-level variables using multi-level analyses. METHODS: A retrospective cohort approach with a baseline and a follow-up period was used. Patient-level data were derived from multi-state Medicaid claims for the period between 2006 and 2008. County-level variables were derived from the Area Health Resources File of 2007. The study cohort consisted of non-olders (21-64 years) Medicaid beneficiaries with selected chronic conditions, who were alive and had continuous fee-for-service enrollment through the observation period and were not enrolled in Medicare and had at least one inpatient encounter in the follow-up period (N=15,806). The dependent variable, 30-day readmission was calculated in the follow-up year as those with an inpatient admission within 30 days from the discharge date of the first observed hospitalization. Multi-level logistic regressions that accounted for beneficiaries nested within counties was used to examine the factors associated with 30-day readmissions.

RESULTS: In this study population 16.7% had all-cause 30-day readmissions. Hispanics were less likely to have 30-day readmission as compared with Caucasians [AOR=0.80, 95% CI 0.70, 0.92], adults with asthma [AOR=1.16, 95% CI 1.01,1.32], dementia [AOR=1.44, 95% CI 1.01,1.87], and stroke [AOR=1.38, 95% CI 0.71,1.78] were more likely to have 30-day readmission and those with cardiac arrhythmia [AOR = 0.82, 95% CI 0.68,0.99] and hypertension [AOR =0.85, 95% CI 0.76,0.94] were less likely to have 30-day readmissions. Adults with greater lengths of stay during the index hospitalization were more likely to have 30-day readmissions [AOR =1.03, 95% CI 0.99, 1.07]. The independent variables were associated with the risk of 30-day readmissions. Programs designed to reduce the risk of 30-day readmissions may need to focus on appropriate disease management.

**PHPS3**

**FACTORS ASSOCIATED WITH ELECTRONIC HEALTH RECORD IMPLEMENTATION AMONG HOSPITALS IN AMERICAN HOSPITAL ASSOCIATION ANNUAL SURVEY DATABASE**

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OBJECTIVES: (1) To determine the proportion of hospitals with and without implementation of electronic health records. (2) To examine characteristics of hospitals that report implementation of EHR partially or completely versus those hospitals that report no implementation of EHR. DESIGN: A longitudinal study using the 2012 American Hospital Association Annual Survey database. The dependent variable was the implementation of EHR completely or partially, while the independent variables were characteristics of the hospital such as type, accreditation, ownership, services and facilities provided independent variables. Descriptive frequencies was followed by multinomial logistic regression to determine variables independently associated with complete or partial implementation of EHR. RESULTS: 12.6% of hospitals reported no implementation of EHR while 43.9% and 45.3% of hospitals implemented EHRs partially and completely respectively. Overall characteristics of hospitals with complete and partial implementation were similar. The multinomial regression model revealed that type of licensed beds, type of service being children’s general medical and surgical heart was associated with complete implementation of EHR. Inversely limited service hospitals, hospitals participating in a network, psychiatric and rehabilitation services, general hospitals, government not-for-profit hospitals showed less likelihood of complete implementation of EHR. CONCLUSIONS: Our findings suggest a possible disconnect between psychiatric and rehabilitation hospitals’ larger, for-profit hospitals and smaller, not-for-profit hospitals in EHR implementation. Policy initiatives need to particularly target these institutions to bridge this possible gap.

**PHPS4**

**EFFICIENCY ANALYSIS OF THE HUNGARIAN OUTPATIENT-CARE SYSTEM WITH DATA ENVIRONMENTAL ANALYSIS**

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**OBJECTIVE:** The objective of our study was to analyze the efficiency of the Hungarian outpatient-care system (2003-2013) and to develop a model (TE and scale efficiency) for it. METHODS: The analysis covered all the Hungarian outpatient care units (N = 539 in 2003, N = 514 in 2006, N = 475 in 2010, N = 494 in 2013). We used the Data Environment Analysis method for analysis, and chose the following variables: the weekly mean working hours of physicians and non-physicians (inputs), number of medical procedures, number of cases, number of the activity points and the reimbursement paid by the National Health Insurance Fund Administration (outputs). The outpatient units were classified into two groups: integrated with hospitals, or independent outpatient clinics. RESULTS: Technical efficiency of the integrated units was 51.6% in 2003, and it was continuously increasing in the following years. Scale efficiency also improved after 2003 (started from 38%, then +27.7% to 2006, decreased -0.8% to 2010, +8% to 2013). The independent units ‘TE’ in 2003 started from 35.3%, the following years it changed with an average of +1.2% to 2013. The efficiency of ‘SE’ in this study we found an optimum capacity of 100-200 hours/week minimum, and 500-600 hours/week maximum limit for the integrated units, and 60-100 hours/week minimum and 500 hours/week maximum for the independent units. CONCLUSIONS: Our study revealed that integrated outpatient units showed better efficiency rate than independent outpatient units. This analysis can give a starting point to the optimization of the Hungarian outpatient-care system. The efficiency scores can give guidelines to the aligned units in order to become more efficient, but the system also needs a more detailed examination.

**HEALTH CARE USE & POLICY STUDIES – Formulary Development**

**PHPS5**

**IMPACT OF COST SHARING INCREASES UNDER PART D SPECIALTY TIER ON PATIENT ADHERENCE AND DISCONTINUATION AMONG MEDICARE BENEFICIARIES WITH MULTIPLE SCLEROSIS OR RHEUMATOID ARTHRITIS**

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OBJECTIVES: Biologic agents represent significant medical advances for rheumatoid arthritis, ankylosing spondylitis, and multiple sclerosis (MS). Yet patient-level adherence under the Medicare Part D low-income subsidy (LIS) tier strategy has not been examined. We examine changes in adherence across the Part D catastrophic coverage period in the previous year (pre-period) and the ICL period in the current year (post-period) for patients not receiving Part B low-income subsidy (non-LIS) who faced coinsurance levels of 5% in the pre-period and 25%-35% in the post-period compared to a control group of LIS patients who faced the same cost-sharing ($5 copay) in the pre- and post-periods. Using the 2006-2010 5% Medicare files we identified patients with MS (ICD-9-CM 340. xx) and RA (ICD-9-CM 714. xx) with continuous fee-for-service Part D coverage and use of Part B biologics indicated for MS (N=1887) and RA (N=1982), respectively, during the pre-period. Outcomes included adherence (proportion of days covered = 0.8) and discontinuation (continuous 30-day gap) for Part D-covered, Part B-covered, and all biologics. GEE logit regressions adjusting for patient demographics and clinical severity and Part D plan formulary characteristics were estimated. Patient-level fixed-effects models were used in sensitivity analyses. RESULTS: The substantial increase in cost sharing under specialty tiers was associated with a decline in adherence and increase in discontinuation of MS and RA biologics.

PHYS5 ASSESSING THE GENEROSITY OF DRUG COVERAGE IN THE HEALTH INSURANCE EXCHANGES
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OBJECTIVES: A key portion of the Affordable Care Act’s new coverage, particularly for seniors, is the prescription drug benefit. Each plan’s generosity will depend on the particular mix of drugs for a given patient, not just the benefit structure. For a market basket of drugs, we assess the generosity of drug coverage for the most costly drugs in the Federally Facilitated health insurance exchanges. METHODS: We examined the 27 federally facilitated exchanges and 7 partnership exchanges, for which characteristics of all plans on the exchanges were publicly available from data.gov for 2014. These files, however, do not contain drug formulary data, so we also use a unique data source of drug formulary data, from Managed Markets Insight & Technology. We were able to identify a total of 2,826 unique plan-formulary combinations with formulary and price data for 21 drugs in these therapeutic areas. For each drug, we collected the price for a standard prescription fill from drugs.com, which allowed us to convert co-insurance rates into prices. We then created a generosity index as the ratio of the out-of-pocket payment to the price of the drug. RESULTS: For individuals with higher drug spending, there is a steeper increase in the generosity of prescription drug coverage in all metal tiers. Comparisons by plan type indicate that PPO plans provide more generous prescription drug coverage, except in the bronze metal tier. In addition, $25,000 or $50,000 PPO plans are significantly more generous than PPO plans until individuals have spent $5,000, or more, out of pocket. CONCLUSIONS: Given the substantial variation in generosity of drug coverage, consumers may have trouble finding the plan that best balances their ability to pay premiums, tolerances for financial risk, and preferences between prescription drug and all other costs.

PHYS7 THE UPTAKE OF BIOSIMILAR PRODUCTS BY BRITISH FORMULARIES
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OBJECTIVES: A "biosimilar" is a biological medicine similar to a licensed biological medicine ("originator"). As of October 2014, six biosimilars are licensed and marketed in Great Britain (GB) (three biosimilar filgrastims, two biosimilar epoetins and one biosimilar somatropin). Biological medicines are highly costly to manufacture and are used as a "reference product" for each type of evidence and to compare the alignment between payers and pharmaceutical companies with respect to the type of HEOR evidence that is important for various product and market scenarios. METHODS: We conducted an online, stated choice survey with individuals involved in the formulary decision-making process for U.S. payer and pharmacy benefit manager (PBM) organizations and those involved in the decision to invest in HEOR for pharmaceutical companies. We presented each individual with thirteen product profiles and asked them to rate the importance of several types of HEOR evidence to support U.S. formulary placement decisions for each profile. We used a local linear probabilistic regression model to assess the product and market attributes that are associated with the stated importance of each type of evidence and to compare the alignment between respondents from pharmaceutical and payer/PBM organizations. RESULTS: We received 31 responses from payer/PBM and 30 responses from pharmaceutical companies. Preliminary results indicate differences across the two stakeholder groups in the perceived importance of budget impact, resource utilization/cost offset, and adherence/compliance evidence. We report on the most influential factors in the types of HEOR evidence that are stated to have an impact on formulary decision-making. CONCLUSIONS: The findings of this survey provide us with a better understanding of the specific types of HEOR evidence that are interesting in for pharmaceutical products entering the market. This nuanced understanding of payer preferences may allow for greater alignment between payer organizations and pharmaceutical companies, and will assist pharmaceutical companies in planning future investments.

PHYS9 THE CALIFORNIA TECHNOLOGY ASSESSMENT FORUM & THE ARRIVAL OF COST-UTILITY APPRAISALS OF DRUGS IN THE USA
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OBJECTIVES: The Californian Technology Assessment Forum (CTAF) publishes reports that make recommendations on the comparative clinical effectiveness and value of medical interventions. The recommendations of CTAF, which is managed by the Institute for Clinical and Economic Review and funded by Blue Shield of California, are not binding and they do not determine health plan benefit coverage. In April 2014, CTAF gained a degree of public attention when they recommended that the Hepatitis C virus (HCV) treatments OLYSIO and SOVALDI be only used if they are accompanied by an interferon-free regimen of other antiviral agents. Preliminary results indicate differences across the two stakeholder groups in the perceived importance of budget impact, resource utilization/cost offset, and adherence/compliance evidence. We report on the most influential factors in the types of HEOR evidence that are stated to have an impact on formulary decision-making. CONCLUSIONS: The findings of this survey provide us with a better understanding of the specific types of HEOR evidence that are interesting in for pharmaceutical products entering the market. This nuanced understanding of payer preferences may allow for greater alignment between payer organizations and pharmaceutical companies, and will assist pharmaceutical companies in planning future investments.