PHPP9
KOREA’S RECOMMENDATIONS ON HEALTH ECONOMIC EVALUATION (2ND AND UPDATED VERSION)
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**OBJECTIVES:** Korea’s Health Insurance Review and Assessment Service (HIRA) has been in charge of updating economic evaluation (EE) guideline. The purpose of this study is to provide minimum standards for submissions, thus increase the comparability between submissions and help decision makers to reach consistent reimbursement decisions. **METHODS:** To prioritize the topics of EE guideline revision, HIRA has reviewed foreign EE guidelines focusing on currently updated topics, and evaluated practical and theoretical needs for updating those topics. Gaps between current recommendations and domestic practice patterns were assessed by evaluating submissions to HIRA for reimbursement decision. In addition, survey results from pharmaceutical companies as well as decision makers regarding current guideline were considered. In developing current revision, experts meetings were held 6 times, and working group meetings with pharmaceutical companies were held 4 times as much consensus as possible. **RESULTS:** Current EE recommendations are in line with most of foreign EE guidelines, yet the gap between current recommendations and domestic reality emerged due to lack of high quality domestic data. Some vague expressions have been noted. To reduce confusion, we clarified the level of data requirement (must, should, preferred) based on data availability and strength of the evidence. We stipulate QALY measurement, modeling methods, sensitivity analysis, and perspective in this revision. Minor updates were also included. **CONCLUSIONS:** Current revision strives to reduce comparability and consequently, enhance comparability among submissions by providing concrete recommendations.

**HEALTH CARE USE & POLICY STUDIES – Quality of Care**

**PHP90**
CASE-MIX ADJUSTMENT OF ADHERENCE-BASED PHARMACY QUALITY INDICATOR SCORES
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**OBJECTIVES:** To evaluate three different methods to compute risk-adjusted pharmacy performance scores based on adherence-based pharmacy quality indicators. **METHODS:** This retrospective cohort study used the 2007 Mississippi Medicare administrative claims dataset. Patient medication adherence was assessed using the proportion of days covered (PDC) measures proposed by the Pharmacy Quality Alliance (PQA) for seven therapeutic classes of medications. Pharmacy performance scores were computed for all pharmacies serving Medicare beneficiaries in the state. Risk-adjusted pharmacy performance scores were computed using a classical logistic regression model (Method 1), a hierarchical random effects model (Method 2) and the shrinkage estimators of the random-effects model (Method 3). Patient demographics, income subsidy status, and co-morbidity burden were used as variables for risk adjustment. The agreement in classification of pharmacies based on unadjusted and adjusted scores was measured using Cohen’s kappa coefficient. **RESULTS:** The logistic regression model and the random-effects model displayed good predictive ability (c-statistic=0.7) for all therapeutic classes. The residual intraclass correlation coefficient ranged from 0.008 to 0.012 indicating that pharmacy-level factors may have a significant impact, they are not as powerful as adherence-based pharmacy quality indicators. **CONCLUSIONS:** The median time to first potassium check in patients receiving spironolactone was 42 days. After adjusting for age, gender, renal function and insurance status, spironolactone was the only factor impacting time to first potassium check-up. Compared to patients with primary liver disease, patients who used spironolactone for ascites/edema due to hepatic or intrinsic causes (e.g., non-hepatic malignancy, nephrotic syndrome) were likely to have a potassium level checked earlier (hazard ratio [HR]=2.2, 95% CI=1.04–4.6), whereas potassium testing was more likely to be delayed in patients with related disorders (HR=0.4, 95% CI=0.2–0.9) or hypertension (HR=0.4, 95% CI=0.2–0.8). **CONCLUSIONS:** Medical indication was significantly predictive of the time to first potassium check in patients receiving spironolactone. It is surprising that renal dysfunction was not a factor, while the association with indication has many possible explanations from increased routine lab testing for some indications and higher risks of hyperkalemia complications. Further studies are needed to validate and understand these data.

**PHP92**
APPLYING ACTUARIAL METHODOLOGY TO HOSPITAL DATA FOR ESTIMATION OF MEDICAL ERRORS
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**OBJECTIVES:** Medical errors cause approximately 44,000 to 98,000 injuries annually in the United States (US). This study estimated the occurrence of medical errors and associated costs using actuarial methodology developed by Milliman, Inc. applied to Premier hospital data. **METHODS:** The Milliman study utilized an expert panel to estimate how often medical injuries were likely to be associated with a medical error, rather than the underlying disease. Injuries were classified into five groups based on the likelihood that they were associated with a medical error. The midpoint of each range of likelihood of medical error was applied to the frequency of each medical injury to establish the rate of medical error. This study utilized Milliman’s ranges and midpoints applied to Premier’s hospital data, injury estimate, and cost-per-error estimates were developed from Premier 2008-2009 data. A visit qualified as an injury visit if >1 of 97 injury groupings identified by Milliman occurred. Non-injury control groups were established using propensity score matching. Population estimates were projected from Premier to all US acute care hospitals. **RESULTS:** While the focus of the earlier report was health plan claims data, this study utilized hospital billing records to demonstrate direct cost of medical errors to hospitals. The rates of medical errors were similar to the Milliman study and both studies found pressure ulcers and postoperative infection were the most common. Milliman estimated that 20% of all medical errors to be approximately $17 billion in 2008. This analysis found that hospitals bear approximately 1 billion in costs related to medical errors. **CONCLUSIONS:** Utilizing methods developed by Milliman, this study estimated the rates and cost of medical errors to hospitals utilizing hospital billing data, revealing similar patterns of errors.

**PHP93**
IMPACT OF PRESCRIPTION MONITORING PROGRAMS ON PHARMACISTS’ CONTROLLED SUBSTANCE DISPENSING BEHAVIOR
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**OBJECTIVES:** Prescription drug monitoring programs (PDMPs) are viewed as a tool to reduce abuse and diversion of prescription controlled substances (CS), although little is known about their effectiveness in achieving these goals. The purpose of this project was to assess the impact of the Kentucky All Schedule Prescription Electronic Reporting program (KASPER) on pharmacists’ dispensing behavior and to evaluate its perceived effectiveness in reducing drug abuse, diversion, and doctor shopping. **METHODS:** Surveys were mailed to 2,018 pharmacists in Kentucky. After two weeks, a reminder postcard and second survey were sent to non-responders. Responses were coded and descriptive analysis was conducted in STATA 11. **RESULTS:** Responses were received from 578 pharmacists (response rate = 28.5%). A majority (77%) indicated that they had read about KASPER and few indicated a negative impact of KASPER on their practice. A large majority (83%) of respondents believe that KASPER is an effective tool to reduce drug abuse and diversion and 79% feel it is an effective tool to reduce doctor shopping. **CONCLUSIONS:** Internet access was the primary reason for not using KASPER. Most pharmacists have not perceived a change in CS dispensing since...