between national culture and EQ-SD value sets. Method Rank correlation analysis is used to explore relationships between the relative values of a set of EQ-SD states and dimensions of national culture. The latter are taken from Hofstede’s framework which operationalizes national culture in 5 dimensions. The analysis is carried out using data from 28 countries for which EQ-SD value sets and scores on Hofstede’s dimensions of culture both exist: Argentina, Denmark, Germany, Japan, Korea, The Netherlands, Poland, Spain, UK, USA. Results Some relationships among the EQ-SD dimensions and culture are observed. Eg, the culture dimension: Power-Distance correlates strongly with the EQ-SD dimension: Authority-Depression (Spearman’s Rs for Power- Distance indices and TTO valuations of EQ-SD states 11112 and 11113 are 0.523 and 0.815 respectively). Strong and moderate relationships are observed among other culture dimensions (Individualism, Masculinity, Uncertainty-Avoidance) and EQ-SD dimensions (Health Care). Discussion Different cultures appear to value EQ-SD dimensions differently. The correlation patterns observed in this study are generally consistent with a priori expectations based on the nature of the dimensions of culture and the EQ-SD model. This analysis demonstrates the potential of national culture in providing insight into the drivers of the relative values of EQ-SD dimensions from different countries, and in informing decisions about which EQ-SD value sets to use in situations where one does not exist.

**ARE HEALTH STATES “TIMELESS?” A TEST OF THE UTILITY INDEPENDENCE ASSUMPTION: COMPARING A REPEATED MEASURES DESIGN AND LATENT GROWTH MODELING**

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OBJECTIVES: Primary study objective was to test whether individuals’ responses to standard gamble (SG) questions do not depend on the duration of time spent in the health scenario presented (“timelessness”). Secondary objective of the study was to test the “timelessness” of VAS responses. METHODS: Face-to-face interviews conducted in a convenience sample of healthy volunteers (N = 59) aged 20 to 63. Individuals rated their preferences for three health states of varying post chemotherapy nausea and vomiting (PCNV) severity and current health, assuming six different time horizons. Repeated measures analysis of variance (RM-ANOVA) was conducted (SX6X4X2) to determine the affect of time (6 levels: 3 days, 3 months, 1-, 5- and 20-year(s) and rest of life), health state (4 levels: mild, moderate and severe PCNV and current health), and method (2 levels: SG and VAS) on preference. RESULTS: Results showed that preferences decreased over time for SG and VAS (p < 0.05). For the RM-ANOVA, all main effects and interaction terms were significant (p < 0.05). LGM showed acceptable fit and significant slope parameters for all PCNV. The slopes were decreasing over time. Significant latent variances for LGM showed that not all individuals change at the same rate over time (p < 0.05). CONCLUSIONS: There is a clear advantage in the use of LGM over RM-ANOVA because LGM can evaluate group differences in addition to individual changes over time. For the majority of respondents the utility independence assumption for SG and VAS did not hold both at the group and the individual level. Similar to Bala et al (1999) and Franco et al (2003) the results of this study indicated preferences as measured by SG and VAS are not timeless. Regardless of the preference measure used: both SG and VAS yield higher preferences for shorter time horizons.

**PODIUM SESSION I: RISK MANAGEMENT STUDIES**

**R1M COMPARATIVE PERFORMANCE OF RISK ADJUSTMENT MEASURES IN A SAMPLE OF COMMERCIALLY-INSURED PATIENTS UNDER AGE 65—TWO SIMPLE MEASURES OUTPERFORM CURRENT STANDARDS**

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OBJECTIVES: Numerous studies have compared risk adjustment measures (RAMs), yet none have done so across various outcomes in multiple acute and chronic conditions in a single database with uniform programmatic operationalization. This study compares the performance of 7 RAMs and highlights practical programming considerations for hands-on data analysts operationalizing RAMs. METHODS: Data were administered from the 2006–2008 MarketScan® Commercial Database. Seven RAMs (2 Deyo-Charlson Comorbidity Index variations, Chronic Disease Score [CDS], 2 ≥ 3-digit ICD-9-CM code count variations, number of unique National Drug Classification [NDC] codes, and number of unique drug molecules) measured over a 1-year baseline period were compared in 7 conditions (acute coronary syndrome, sample N = 14,951; rheumatoid arthritis [RA], N = 27,085; depression, N = 129,206; diabetes, N = 126,087; hypertension, N = 225,080; asthma, N = 36,172; fibromyalgia, N = 52,365) on the basis of 3 outcomes (total health care cost, emergency room [ER] visits, and inpatient admissions) measured over a 1-year time horizon. Results: chi-squared statistic for total health care costs and c-statistic for ER visits and inpatient admissions were compared across age and sex-adjusted regression models for each individual RAM. RESULTS: A unique ≥ 3-digit ICD-9-CM code count that could be obtained for each patient’s diagnoses consistently outperformed other measures. Goodness-of-fit statistics (chi-squared statistic for total health care costs and c-statistic for ER visits) were the most predictive measures of total health care cost, ER visits, and inpatient admissions.

**RM2 IMPACT OF ADHERENCE WITH STATIN THERAPY ON HOSPITALIZATION RISK AND MORTALITY AMONG PATIENTS WITH DIABETES**

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OBJECTIVES: The objective of this study was to evaluate the impact of adherence with statin therapy on diabetes-specific hospitalization and all-cause mortality among patients with diabetes enrolled in a state Medicaid program. METHODS: The authors conducted a retrospective cohort study of patients with diabetes who were continuously enrolled in a state Medicaid program from January 2002 to December 2004. The date of the first medication claim for statin during the first six months of 2002 was the index date. Adherence to statin was assessed within one year following the index date. Adherence was assessed using the proportion of days covered (PDC) and patients with a PDC of 0.8 or greater were considered being adherent. The primary outcomes of interest were diabetes-specific hospitalization and all-cause mortality during the follow-up period (end of adherence measurement to December 31, 2004). Multivariate regression analyses were performed to assess the impact of adherence with statin therapy on outcome measures. RESULTS: A total 10,839 patients were included in the study. Mean age 60.3 ± 10.0 years, 23.8% male, 76.2 female; 31.7% white, 50.4% black. At 12 months after the index prescription, only 23.9% of patients were adherent with their prescribed statin therapy. During follow-up After controlling for age, gender, race, prior hospitalization, and Charlson comorbidity index, patients who were adherent to statin therapy were 48.7% (OR: 0.513; 95%CI: 0.421–0.624) less likely to have diabetes-specific hospital admissions in comparison to nonadherent patients. Adherence with statin therapy had no statistically significant impact on all-cause mortality (OR: 0.801; 95%CI: 0.454–1.412). CONCLUSIONS: Adherence with statin therapy was poor among patients with diabetes enrolled in a Medicaid program. Adherence with statin therapy was associated with significantly less risk for diabetes-specific hospitalization. Greater efforts are needed to facilitate diabetes self-management behaviors to improve patient outcomes.

**R2M RISK OF FALLS AND FRACTURES IN OLDER ADULTS USING ATYPICAL AND TYPICAL ANTIPSYCHOTIC AGENTS: A PROPENSITY-MATCHED RETROSPECTIVE COHORT STUDY**

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OBJECTIVES: To examine the risk of falls/fractures associated with atypical antipsychotic use compared to typical antipsychotic use in community dwelling older adults. METHODS: The population based retrospective cohort analysis based on propensity score matching was conducted using IMS LifeLink™ Health Plan claims data. Patients were included in the cohort if they met following criteria: ≥ 50 years of age, new users of atypical or conventional antipsychotics who began taking antipsychotics between July 2000 and December 2007, and continuously enrolled for six months before and at least six months after initiation of antipsychotic treatment. Patients taking atypical antipsychotics were matched with those taking typical antipsychotics using propensity score greedy matching technique. Kaplan-Meier survival curves and Cox proportional hazard model stratified on matched pair was employed to examine risk of hospitalization/emergency visit due to falls or femur fractures within one year. Duration of antipsychotic therapy and exposure to other psychotropic medications were controlled for in the final model. RESULTS: A total of 11,160 older adults (5,580 atypical and 5,580 typical users) were identified as new users of antipsychotics after matching. Within one year of follow up period, 456 patients (8.06 %) in atypical drug group had falls/femur fractures compared to 375 (7.62%) in typical antipsychotic group. No significant difference was found between atypical users compared to typical agents with respect to risk of falls/fractures [Hazard Ratio (HR) 1.01, 95% CI 0.83–1.22]. However, duration of therapy more than 90 days was significantly (HR, 1.81, CI, 1.35–2.43) associated with increased risk of falls/fractures compared to less than 30 days. CONCLUSIONS: Statistically significant differences in the risk of falls/fractures between atypical and typical antipsychotic use among older adults. However, there is a need to be cautious while prescribing atypical and typical antipsychotics in older adults for longer periods of time.

**RM4 CONFOUNDED EFFECT OF AGE IN THE ASSOCIATION OF CARDIOVASCULAR RISK AND DIETARY SUPPLEMENT USE AMONG US ADULTS**

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OBJECTIVES: Dietary supplement (DS) use has been found to be associated with cardiovascular disease (CVD) risk. This study assessed whether age moderates or confounds the association between CVD risk and DS use. METHODS: Data were taken from the 1999–2004 waves of the National Health and Nutrition Examination Survey. Inferences were restricted to US population members ≥20 years of age as
COST-EFFECTIVENESS OF POLYMXYN B IMMOBILIZED FIBER COLUMN AND CONVENTIONAL MEDICAL THERAPY IN THE MANAGEMENT OF SEVERE ABDOMINAL SEPSIS IN ITALY

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OBJECTIVES: Severe abdominal sepsis and septic shock (SAS-SS) are common problems in intensive care units (ICUs), and carry high mortality. This study assessed the cost-effectiveness of Polymyxin B immobilized fiber column (PMX) plus conventional therapy (CT) (PMX-CT) versus CT alone, for SAS-SS, in the perspective of the Italian NHS hospital.

METHODS: This study was a retrospective cost-effectiveness analysis (CEA) with clinical efficacy and consumption of resources collected alongside an RCT (CRU, 2005). SAS patients were enrolled following emergency surgery for intra-abdominal infection in 10 tertiary care ICUs, from 12/2004 to 12/2007. Costs included: hospital days, ICU days; catecholamine treatment days; renal replacement therapy (RRT) days; mechanical ventilation treatment (MV) days; use of PMX device. Results were valued using published tariffs and market values. All-cause hospital mortality was extrapolated to survival (expected life-years per patient/arrow) for each survivor average life expectancy (in years) by age and sex was retrieved from National Life Tables; for deceased patients, only the number of survival days as reported in the CRF, was retained. Per patient survival was then weighted using a predicted death rate based on individual Apache II scores, to account for disease severity. Univariate sensitivity analyses on costs and outcomes and 2000 Bootstrap simulations were run to test CEA’s results. RESULTS: Based on the expected number of survival years (PMX-CT 8.24/patient, CT 4.69/patient), the mean difference in survival yielded an expected increase of 3.51LY/patient for PMX-CT, at the additional cost of €11,413/patient with a mean ICER of €3,774/LYG and a median ICER of €2,776/LYG. Results of the base-case CEA were confirmed by all sensitivity analyses with ICER values always well below commonly accepted value thresholds. CONCLUSIONS: PMX-CT vs. CT is a cost-effective intervention for treatment of severe abdominal sepsis and septic shock and should be considered for use in the Italian NHS’ hospital setting.

COST-EFFECTIVENESS OF SILDENAFIL IN THE MANAGEMENT OF PULMONARY ARTERIAL HYPERTENSION IN MEXICAN ADULT PATIENTS

Pulmonary arterial hypertension (PAH) is a clinical condition that causes decreased exercise tolerance and heart failure. The aim of this study was to assess the cost-effectiveness of different drugs to manage PAH in adult, functional class III, patients, who have failed previously to calcium antagonists, from the health care payer perspective. METHODS: A five-state Markov model was performed to estimate one year costs and health consequences (1-month cycles). Effectiveness measures were quality-adjusted life years (QALYS). Treatment costs, and management costs were increased of $6,004 (84,047 vs 80,043), 243 (28,913 vs 28,670) Chinese Yuan (CNY) respectively. However, the costs for complications including central venous catheterization, pulmonary edema, and hypoglycemia events were reduced by 4,931 CNY (89,628 vs 94,559), 243 (28,913 vs 28,670) Chinese Yuan (CNY) respectively.

RESULTS: There was a potential for residual confounding by age in studies of CVD risk and DS use. After adequately controlling for age in this study, the relationship between CVD risk and DS use was greatly attenuated. The findings indicated different patterns of responses to cardiovascular disease risk between younger adults and older ones in terms of DS consumption. Awareness of the confounding effect of age in the association of CVD risk and DS use should be noted in clinical practice and health promotion.

PREDICTION STUDY

PODIUM SESSION II: COST-EFFECTIVENESS STUDIES

COST-EFFECTIVENESS OF SWITCHING PATIENTS WITH TYPE 2 DIABETES FROM INSULIN GLARGINE TO INSULIN DETEMIR IN A CHINESE SETTING: A HEALTH ECONOMIC MODEL BASED ON THE PREDICTIVE STUDY

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OBJECTIVES: To evaluate the long-term cost-effectiveness of switching from insulin Glargine (IGla) to Insulin Detemir (IDet) in type 2 diabetes patients in the setting of Chinese tier 3 hospitals. METHODS: A published and validated computer simulation model of diabetes (the CORE Diabetes Model) was used to make the long-term (30 years) projection of health economic outcomes. Patient demographic information and clinical endpoints were derived from a subgroup analysis of the PREDICTIVE study. RESULTS: A large, multi-centre, 6 months observational study assessing the safety and efficacy of IDet in everyday clinical practice. HRQoL was reduced of 0.35 % by switching from IGla to IDet. Baseline risk factors and racial characteristic data were obtained from Chinese cohort studies. The market retail prices of medications were calculated to estimate treatment costs. The diabetes management and complications costs were obtained from Chinese published data and adjusted to 2009 values using the Chinese Consumer Price Index. An annual discounting rate of 3% was used for both health and cost outcomes according to the recommendation of Chinese Pharmacoeconomics guideline. One-way sensitivities analysis was performed and illustrated that the results were robust. RESULTS: Conversion to IDet from IGla was projected to improve patient life expectancy by 0.09 year and 0.36 quality adjusted life years (QALYS). Treatment costs, and management costs were increased of $4,004 (84,047 vs 80,043), 243 (28,913 vs 28,670) Chinese Yuan (CNY) respectively. However, the costs for complications including central venous catheterization, pulmonary edema, and hypoglycemia events were reduced by 4,931 CNY (89,628 vs 94,559), 243 (28,913 vs 28,670) Chinese Yuan (CNY) respectively.

RESULTS: There was a potential for residual confounding by age in studies of CVD risk and DS use. After adequately controlling for age in this study, the relationship between CVD risk and DS use was greatly attenuated. The findings indicated different patterns of responses to cardiovascular disease risk between younger adults and older ones in terms of DS consumption. Awareness of the confounding effect of age in the association of CVD risk and DS use should be noted in clinical practice and health promotion.

COST-EFFECTIVENESS OF SILDENAFIL IN THE MANAGEMENT OF PULMONARY ARTERIAL HYPERTENSION IN MEXICAN ADULT PATIENTS


Link’s PC Lab, Mexico City, Mexico, 1Pjom Consulting, Mexico City, Mexico, 2,3SA de CV, México City, Mexico

OBJECTIVES: Pulmonary arterial hypertension (PAH) is a clinical condition that causes decreased exercise tolerance and heart failure. The aim of this study was to assess the cost-effectiveness of different drugs to manage PAH in adult, functional class III, patients, who have failed previously to calcium antagonists, from the health care payer perspective. METHODS: A five-state Markov model was performed to estimate one year costs and health consequences (1-month cycles). Effectiveness measures were quality-adjusted life years (QALYS). Treatment costs, and management costs were increased of $6,004 (84,047 vs 80,043), 243 (28,913 vs 28,670) Chinese Yuan (CNY) respectively. However, the costs for complications including central venous catheterization, pulmonary edema, and hypoglycemia events were reduced by 4,931 CNY (89,628 vs 94,559), 243 (28,913 vs 28,670) Chinese Yuan (CNY) respectively.

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COST-EFFECTIVENESS OF POLYMXYN B IMMOBILIZED FIBER COLUMN AND CONVENTIONAL MEDICAL THERAPY IN THE MANAGEMENT OF SEVERE ABDOMINAL SEPSIS IN ITALY

Objective: The prevalence of use of any of the six DSs increased with age. Odds ratios for any DS use for the at-risk and diseased groups, relative to the low-risk group, were 1.91 (95% CI: 1.67–2.17) and 2.25 (95% CI: 1.88–2.69), respectively. With adjustment for age, these became 1.32 (95% CI: 1.15–1.52) and 1.20 (95% CI: 0.99–1.44), respectively. There was no evidence of moderation (p = 0.123), though confounding was present (p = 0.001).

CONCLUSIONS: There is a potential for residual confounding by age in studies of CVD risk and DS use. After adequately controlling for age in this study, the relationship between CVD risk and DS use was greatly attenuated. The findings indicated different patterns of responses to cardiovascular disease risk between younger adults and older ones in terms of DS consumption. Awareness of the confounding effect of age in the association of CVD risk and DS use should be noted in clinical practice and health promotion.