The 6-month total medical cost for DES and BMS were similar.

PM6
READMISSION RATES AND COSTS ASSOCIATED WITH FIBRIN SEALANT USE AMONG PATIENTS UNDERGOING ORTHOPEDIC SURGERY
Ye X1,2, Wang D3,4, Hammond 3
1Texas Tech University, Lubbock, TX, USA 2University of Texas, Dallas, TX, USA 3Surgical Services, UTHSC, San Antonio, TX, USA 4University of Texas, Southwestern Medical Center, Dallas, TX, USA
OBJECTIVES: Payers and hospital administrators are increasingly concerned about readmission rates in surgical patients. We sought to examine the readmission rates and hospital costs associated with EVICEL fibrin sealant (all-human formulation), versus VITAGEL fibrin sealant (bovine thrombin), or no adjunct hemostat use for patients undergoing inpatient joint replacement surgeries. METHODS: A retrospective analysis was conducted using Premier administrative data from over 500 US hospitals. Hospitalized patients (≥18 years) who underwent orthopedic surgery (ICD codes: EVICEL, VITAGEL, or no hemostat during the period from January 1, 2009 and November 30, 2009 were identified. A 1:1 (EVICEL-VITAGEL) and 1:3 (EVICEL: no hemostat) match was conducted using surgery type and propensity scores of receiving EVICEL, based on patient and hospital characteristics via a logistic regression model. The outcomes included 30-day all-cause readmission rates and total index hospital costs. Differences in readmission rates were analyzed using conditional logistic regression. A generalized linear model with log-link/gamma distribution was used for analyzing differences in total costs. RESULTS: A total of 316 patients were identified (158 per cohort) for the EVICEL versus VITAGEL and 1,808 patients for EVICEL (n=452) versus no hemostat (n=1,356) analysis. Patients in the VITAGEL cohort were 6.8 times more likely to be readmitted to the hospital compared to the EVICEL cohort (12.7% vs. 3.8%, OR=6.81, 95%CI: 2.82, 16.66). Patients in the no hemostat cohort were 1.6 times more likely to be readmitted compared to the EVICEL cohort. Total index hospital cost was lower for the EVICEL cohort ($16,704) compared to VITAGEL cohort ($18,192; p<0.001) on average. The EVICEL cohort ($17,387) had similar total costs compared to no adjunct hemostat group. CONCLUSIONS: Lower readmission rates and similar total costs were present for EVICEL use compared to VITAGEL or adjunct hemostat use in inpatient joint replacement surgeries.

PM7
DIFFERENCES IN OUTCOMES MEASURES OF DIABETES PATIENTS USING AN INSULIN DEVICE AND A CONVENTIONAL HUMAN INSULIN VIAL/SYRINGE
Baser Q1, Wang LI, Yuce H2, Xia L3, Dysinger AH
1STATMed Research, Ann Arbor, MI, USA 2New York City College of Technology- CUNY/CAHNR, Brooklyn, NY, USA
OBJECTIVES: To compare the main outcomes differences including clinical events, health care utilization and costs of patients using an insulin device for diabetes versus patients using the conventional human insulin vial/syringe. METHODS: Using a retrospective analysis of health insurance claims data between the years 2003 and 2008, we identified patients with a diagnosis of diabetes and then divided them into an insulin device cohort and a human insulin vial/syringe cohort, based on their prescription fills. Patients’ demographics, health care visits and costs were compared using Chi-square testing and standardized differences. The 12-month follow-up clinical events, health care utilization and costs for patients were compared. Risk adjustment was performed using the propensity score matching method with the ProBCharm algorithm. RESULTS: A total of 12,400 eligible patients were identified as using insulin for diabetes: 1,236 (9.97%) received the insulin device and 11,164 (90.03%) using the conventional human insulin vial/syringe. Stat use for patients undergoing inpatient joint replacement surgeries.

PM8
POSITRON EMISSION TOMOGRAPHY SCREENING FOR LUNG CANCER: A SYSTEMATIC REVIEW
Chien CR, Kao CH, Wang HW, Liang JA
China Medical University Hospital, Taichung, Taiwan
OBJECTIVES: There is no established effective lung cancer screening modality. Positron Emission Tomography (PET) is helpful in lung cancer disease extent evaluation. The objective of our study is to evaluate the role of PET in lung cancer screening via systematic review. METHODS: Using a strategy similar to a previous comparison of tumor nodules among lung cancer screening systematic review (Black et al. Thorax 2007;62:131–138), we searched for primary studies focusing on PET screening for lung cancer using the following keywords: “(lung cancer) AND (positron emission tomography) AND (screen OR (screening))” in PubMed® on Nov 30th, 2010. We then reviewed all the identified studies independently to find out studies compatible with our inclusion/exclusion criteria. Further discussion with 3rd reviewer (Kao C.H.) was taken to reach conclusion when there was any disagreement among the reviewers. Manual searching for relevant studies was also performed from the included studies. We restricted our analysis to non-overlapped studies published since 2000 and in English. RESULTS: Among the identified studies (n=2733), 239 studies were published before 2000, 2440 studies were excluded due to irrelevant titles and keywords, and another 34 studies were excluded after reviewing the abstracts. Full paper evaluation led to further exclusion of 11 studies, and manual search led to inclusion of 2 additional studies, leaving 11 studies for analysis. No studies evaluated the efficacy of primary PET screening specific for lung cancer. Eight studies focused on primary PET screening for cancer, and three studies reported finding in lung cancer CT screening programs with selective PET. CONCLUSIONS: The role of primary PET’s screening for lung cancer remains unknown. PET has the potential to be used as a screening modality not specific for lung cancer and as a selective modality in combination with CT for lung cancer screening. [1] Black et al. Thorax 2007; 62:131-138

PM9
ESTIMATION OF QUALITY-ADJUSTED LIFE EXPECTANCY AND LOSS OF QUALITY-ADJUSTED LIFE EXPECTANCY IN PATIENTS UNDER PROLONGED MECHANICAL VENTILATION: A POPULATION-BASED STUDY DURING 1998-2007 IN TAIWAN
Hung MC1, Wang JD2
1National Taiwan University, Taipei, Taiwan, 2National Cheng Kung University College of Medicine, Tainan, Taiwan
OBJECTIVES: The quality-adjusted life expectancy (QALE) and loss of quality-adjusted life expectancy (loss of QALE) in patients under prolonged mechanical ventilation (PMV) stratified by different underlying diseases were determined. METHODS: A simple random sample of all 171,635 patients who were performed continual mechanical ventilation for more than 21 days during the 1997-2007 periods in Taiwan left us 50,481 subjects. After stratifying the patients according to specific diagnoses, we performed latent class analysis (LCA) to categorize PMV patients with multiple comorbidities into several groups. The survival functions were estimated for each group with Kaplan-Meier method and extrapolated to 300 months to obtain the life expectancies through a semi-parametric method. The results were adjusted with a utility measurement of quality of life to estimate the QALE (quality-adjusted life expectancies). Further, we compared the age-, gender-matched reference populations to calculate the loss of QALE. RESULTS: The QALE of PMV patients with chronic renal failure were 0.42 and 0.19 quality-adjusted life years (QALY) for conscious clearance versus unclear states, respectively; those of patients with cancer were 0.48 and 0.22, respectively; those of patients with Parkinson’s disease were 0.62 and 0.27, respectively, those of patients with liver cirrhosis were 0.98 and 0.43 respectively; those of patients with stroke were 0.03 and 0.46 respectively; those of patients with degenerative neurological diseases were 1.47 and 0.46 respectively; those of patients with injuries and poisoning were 0.81 and 0.78 respectively. The LCA classified cases with multiple comorbidities into several categories, of which groups were a consistent trend of decrease in QALE and loss of QALE as people grow older. CONCLUSIONS: The results could hopefully reduce the gap between patients’ families and health care providers and assist the clinical and health policy decisions.

PM10
SCREENING TREATMENT AND CONTROL OF HYPERTENSION IN DIABETIC PATIENTS USING OUTPATIENT VISIT DATA
Surbhi S, ML Mackey
St. John’s University, Queens, NY, USA
OBJECTIVES: Blood pressure control is a great challenge in the diabetic patient population since the blood pressure target is lower, <130/80, as compared to <140/90 in general population. The objective of this study was to examine the rate and the association of patient characteristics (demographic, access to health care and clinical factors) and practice characteristics with hypertension screening, treatment and control in diabetic population. METHODS: Using the National Ambulatory Medical Care Survey and the National Hospital Ambulatory Medical Care Survey 2006 were used to analyze outpatient visits made by adults18 years and older diagnosed with diabetes. Descriptive analysis was done to find the rate and linear logistic regression was carried out to find the predictors. Statistical significance was set at alpha of 0.05. RESULTS: Hypertension screening, treatment and control rate was 66.9%, 53.1% and 28.4% in diabetic patients. The odds of not getting screened were visits other than primary care physician (OR7.52), with no diagnostic tests (OR6.3), having no morbidities (OR3.64), non obese (OR1.72) and increasing age (OR2.03, OR2.35, OR2.72). Odds of not being treated were settings located in non-university hospitals (OR1.98), states with no health insurance (OR1.9), with no occupational insurance (OR1.9). CONCLUSIONS: The study found that although more than 50% of the diabetic patients were screened and treated, blood pressure control was found in only one third of the population. Both the patient factors: demographic, access to health care, clinical factors and practice characteristics were responsible for poor quality of hypertension screening and treatment and poor blood outcome (blood pressure control).

PM11
IDENTIFYING POTENTIAL DRIVERS OF COST SAVINGS WITH INSULIN ADMINISTRATION DEVICES IN TYPE-2 DIABETES IN THE UNITED STATES
Pollock RF1, Curtis B2, Boye KS3, Timlin L1, Valentine WJ1
1Ossian Health Economics and Communications, Basel, Switzerland, 2Eli Lilly and Company, Indianapolis, IN, USA, 3Lilly UK, Windlesham, Surrey, UK
OBJECTIVES: Hypertension screening, treatment and control...
OBJECTIVES: To investigate potential drivers of costs and cost savings when assessing the budget impact of insulin administration devices (IADs) in patients with type 2 diabetes (T2D).

METHODS: A Microsoft Excel®-based model was constructed to assess the budget impact of new reusable IADs in patients with T2D. The model captured patient-level costs (insulin, needles, self-monitoring of blood glucose strips and glucometers) and the direct medical costs of a number of diabetes complications (minor and major hypoglycemia, myocardial infarction, stroke, end-stage renal disease, blindness and amputation). Scenarios were constructed to assess the budget impact of changes in hypoglycemia rates, compliance and insulin wastage associated with a new IAD. The analyses were performed in a one million member US healthcare plan from the payer perspective. Future costs were discounted at 3% per annum and sensitivity analyses were performed.

RESULTS: In a base-case analysis, switching from conventional pharmacologic treatment (PT) to a new IAD resulted in decreased hypoglycemia rates and insulin wastage, resulting in decreased healthcare expenditure over five years. CONCLUSIONS: An IAD capable of reducing hypoglycemic event rates and insulin wastage whilst improving compliance would likely be cost saving overall.

PMD12

GENDER DIFFERENCES IN TOTAL KNEE ARTHROPLASTY (TKA) POSTOPERATIVE PAIN MANAGEMENT IN THE UNITED STATES

Graver RM1, Domyahn M1, Read CE2, Menzie AM1, Feinglass SR2

1Emory University, Atlanta, GA, USA, 2Zimmer, Warsaw, IN, USA

OBJECTIVES: The objective of this analysis was to highlight the differences in gender pain management after a total knee arthroplasty in the United States.

METHODS: We identified 103,600 TKA procedures from the Thomson Reuters MarketScan® Commercial and Medicare Claim databases from January 1, 2003 through June 30, 2009. For these procedures, we analyzed $837,237 pharmaceutical claims for muscle relaxants and analgesics/antipyretics for the 12-month postoperative period. The mean direct costs were calculated for each calendar year for gender cohorts and not inflation-adjusted. Wilcoxon-Mann-Whitney tests were run for each year to determine statistical significance among the gender cohorts.

RESULTS: During the analysis period, we found statistically significant differences in pharmaceutical pain management spending between male and female cohorts. The female cohort spending averaged $646 per patient for the 12-month postoperative period compared to $764 for the male cohort. This represents a 18% difference. During this same period, the average number of pharmaceutical pain management claims per TKA decreased for all cohorts but these averages exhibited convergence in 2008 as spending by males increased slightly.

CONCLUSIONS: Published studies have failed to agree on the correlation between gender and postoperative pain. A recent postoperative pain study concluded that "gender was not found to be a consistent predictor as traditionally believed." However, our retrospective analysis of actual claim data provides a statistically significant correlation between female gender and increased consumption of postoperative muscle relaxants and analgesics for the total knee arthroplasty procedures. These data may help surgeons provide appropriate postoperative care for their TKA patients.

PMD13

POST INGUINAL HERNIA REPAIR PAIN MANAGEMENT COSTS: A STUDY USING THE PREMIER PERSPECTIVE™ DATABASE (PPD)

Morseon M, Hashemi L, Cowden, Franklin, MA, USA

OBJECTIVES: Several studies have reported on the ability to reduce post-operative pain following inguinal hernia repair by self-fixating mesh. Our study examines the overall costs increases post-op pain following inguinal hernia repair and through a survey of 30 surgeons who perform inguinal hernia repair surgery. Responses were collected to specific pain management strategies employed, and average per patient costs when postoperative pain was mild, moderate, and severe.

METHODS: A total of 51,108 patients undergoing inguinal hernia repair were identified in the PPD during our study timeframe. An ICD-9 diagnostic code representing acute or chronic pain was present in 228 discharges. The mean cost per discharge for patients with diagnosis of acute pain was $5,309, compared to $2,910 for patients without the diagnosis. Costs per discharge of the physical therapy visits reported they would prescribe pain therapy with a cost of less than $ 100.00. For moderate pain the breakdown was 70% less than $100.00 and for severe pain 44% indicated the costs would be less than $100.00.

CONCLUSIONS: The management of pain following inguinal hernia repair varies among the pre- and postoperative pain management strategies of insurers and patients. In addition, costs appear to increase in relation to the severity of the pain reported. Inguinal hernia repair techniques which result in reduced post operative pain such as using self-fixating mesh have the potential to reduce the costs associated with Inguinal Hernia repair.