

months after surgery. **RESULTS:** A total of 5311 patients were part of the study cohort (85.1% female, age at surgery  $38.5 \pm 10.1$  years, 61.9% with at least one obesity-related co-morbidity). At 12-months, data from 1,035 patients were available, with 96.1% of patients scoring good or better at BAROS. Adherence to follow-up visits was not significantly associated with BAROS at 1 year (coefficient -0.046, 95%CI -0.218 to 0.126). At 24-months, data from 319 patients were available, with 92.2% scoring good or better at BAROS. Adherence to follow-up visits was significantly associated with a better BAROS score (coefficient 1.66, 95%CI 1.13-2.18). In multivariate linear regression, presence of co-morbidity is associated with higher BAROS scores at 24 months ( $p < 0.001$ ), and adherence to follow-up visits acts as an effect modifier of this association, with a positive effect in the sub-group with co-morbidity. **CONCLUSIONS:** Patients with obesity related co-morbidity seems to benefit more from RYGB at 24 months post-surgery. Adherence to medical appointments is an important variable to drive better outcomes in this population.

### PSU30

#### A SYSTEMATIC REVIEW OF THE USE OF PATIENT-CENTERED OUTCOME MEASURES IN STUDIES OF SPINAL FUSION SURGERY FOR DEGENERATIVE DISC DISEASE: IMPLICATIONS FOR COMPARATIVE EFFECTIVENESS RESEARCH

Menzin J<sup>1</sup>, Nichols C<sup>1</sup>, Mwamburi M<sup>2</sup>, Federico V<sup>1</sup>, Kemner JE<sup>3</sup>

<sup>1</sup>Boston Health Economics, Inc., Waltham, MA, USA, <sup>2</sup>Tufts University School of Medicine, Boston, MA, USA, <sup>3</sup>Medtronic Spinal and Biologics, Memphis, TN, USA

**OBJECTIVES:** While radiographic fusion and pain are commonly-reported outcomes in clinical studies of spinal fusion for degenerative disc disease (DDD), patient functioning is often the main goal of treatment. Given the increasing emphasis on patient-centered outcomes in comparative effectiveness research, we sought to examine the frequency and trends in reporting of functional outcomes in spinal fusion studies. **METHODS:** A search of PubMed and Cochrane from July 2011, 1975 was conducted. Inclusion criteria included: English, abstract available, human subjects,  $\geq 1$  arm with lumbar fusion, pain/functional outcomes reported, minimum two years follow-up, adults with DDD including: spondylosis, spondylolisthesis, stenosis, disc herniation, degenerative scoliosis, standalone DDD, or discogenic back pain, all with mention of degeneration. Functional outcomes included the Oswestry Disability Index (ODI), SF36 Physical Component (PCS), and SF36 Physical Functioning (PF) Subscale. Results were stratified by study type (randomized control trial [RCT] vs. non-RCT) and publication year (2007-2011 versus before 2007). **RESULTS:** Out of 1526 titles and abstracts reviewed, 64 studies met study inclusion criteria with a median sample size of 51 and median age of 55. Thirty-seven (58%) of these were published between 2007 and 2011, with only 16 (25%) being RCTs. ODI was the most commonly reported patient centered outcome ( $N=48$ , 75% of studies), while SF36 scores were less commonly reported ( $n=11$ , 17% of studies). A higher proportion of RCTs reported functional outcomes compared to non-RCTs (ODI: 81% versus 73%; PCS or PF: 25% versus 15%). Thirteen studies (81%) from 2007-2011 reported ODI compared to 67% ( $N=18$ ) of older studies. **CONCLUSIONS:** In published studies of spinal fusion surgery for DDD, we found an increasing use of functional outcomes measures, especially in randomized clinical trials, over the past five years. The reporting of such measures will greatly enhance opportunities to conduct meta-analyses of clinical trial results to inform decisions about comparative effectiveness.

### PSU31

#### THE IMPROVEMENT OF QUALITY OF LIFE IN PATIENTS TREATED WITH BARIATRIC SURGERY

Oh SH, Song HJ, Lee HJ, Lee JY, Choi JE, Kwon JW

National Evidence-based Healthcare Collaborating Agency (NECA), Seoul, South Korea

**OBJECTIVES:** This study was conducted to compare the improvement of quality of life in patients treated with either bariatric surgery or conventional therapy in obese Korean people. **METHODS:** The quality of life was investigated for 53 patients who underwent bariatric surgery and 25 patients who were treated by conventional therapy in 7 tertiary medical centers. The quality of life was measured right before treatment and after at least five month of that by self-report instruments; The instruments for measuring quality of life were EuroQol-5D (EQ-5D), Impact of Weight on Quality of Life-Lite Questionnaire (IWQOL-Lite), and Obesity-related Problem scale (OP-scale). Through the medical chart review, percent weight change from baseline was investigated. The difference of QOL improvement from baseline between two treatments was compared using the t-test. The relationship between weight control and QOL improvement was also investigated. **RESULTS:** The improvement of QOL was 0.174 in EQ-5D index score and 24.6 in VAS score for bariatric surgery, and 0.071 and 17.8 for conventional therapy. QOL score using IWQOL-Lite and OP-scale were 33.4 and 39.3 for bariatric surgery and 14.3 and 9.6 for conventional therapy. Measuring by obesity-specific questionnaires (IWQOL-Lite and OP-scale), the improvement of QOL before and after treatments was significantly higher in bariatric surgery than conventional therapy, but the general questionnaires (EQ-5D 3 level and EQ-VAS) did not show. The percent weight change from baseline had positive correlation with the improvement of QOL. **CONCLUSIONS:** The improvement in quality of life was significantly higher among bariatric surgery group compared with the conventional therapy group, especially for the obesity specific questionnaires.

### SURGERY – Health Care Use & Policy Studies

### PSU32

#### ASYMPTOMATIC CHOLELITHIASIS IN KIDNEY TRANSPLANT RECIPIENTS: SYSTEMATIC REVIEW OF SURGERY APPROPRIATENESS

Mata A<sup>1</sup>, Bouza C<sup>2</sup>, Salinas J<sup>1</sup>, Salvatierra LD<sup>1</sup>, Freire E<sup>1</sup>

<sup>1</sup>La Paz University Hospital, Madrid, Spain, <sup>2</sup>Instituto de Salud Carlos III, Madrid, Spain

**OBJECTIVES:** Cholecystectomy is one of the most common surgical interventions performed around the world, and it consumes great healthcare resources. Though usually effective and safe, it associates adverse events, sometimes severe, being considered a quality indicator of the healthcare system performance. Asymptomatic gallstones are not considered an indication for surgery. Immunosuppression among other conditions is an exception to this rule. Clinical controversy exists in renal transplant recipients where cholelithiasis incidence is recognized to be high and complications of gallstones may be harmful. Our objective is to assess the appropriate use of cholecystectomy in kidney transplant recipients with asymptomatic cholelithiasis. **METHODS:** We performed a systematic review of the published literature since 1997 to date, using Medline, Embase, ISI Web of Science and Sumsearch. The search strategy included the terms: asymptomatic gallstones, cholelithiasis, cholecystectomy, and kidney or renal transplant. Studies were selected for inclusion on the basis of their population, intervention, and clinically relevant outcomes. Studies were critically appraised with respect to methodological quality, grade of scientific evidence, and clinically relevant outcomes. **RESULTS:** From 38 potentially relevant studies, 19 articles were disregarded because of pre-transplant and other conditions. Nineteen studies were included. Much of the research identified was of poor quality. As there was considerable heterogeneity we considered it inappropriate to pool the data for meta-analysis. There is little information on its optimal approach, appropriate indications, limiting factors, side effects, long-term outcomes and potential advantages over surveillance. **CONCLUSIONS:** Current available literature shows a low degree of consensus regarding cholecystectomy indication in asymptomatic patients. Some studies advocate surgery to avoid gallstones complications while others claim that risks are the same as in general population. Uncertainty remains surrounding this problem and research of good methodological quality is urgently required to define the appropriate role of surgery.

### PSU33

#### RELATIONSHIP BETWEEN PATIENT CHARACTERISTICS AND DISCHARGE DESTINATION FOLLOWING TOTAL KNEE ARTHROPLASTY (TKA)

Kirkness CS<sup>1</sup>, Peters CL<sup>2</sup>, Fritz JM<sup>2</sup>

<sup>1</sup>University of Illinois at Peoria, Peoria, IL, USA, <sup>2</sup>University of Utah, Salt Lake City, UT, USA

**OBJECTIVES:** Recent reductions in length of hospital stay after TKA have resulted in an increased demand on extended care facilities (ECF) to manage TKA postoperative care. An exponential increase in TKA procedures is expected by 2030 and a shortage of resources to meet the increase is projected. Determining what factors affect patients to be discharged directly home or to rehabilitation may assist resource allocation decisions. The objective of this study was to identify if preoperative patient characteristics (age, gender, comorbidities, physical function and activity) were associated with discharge to an ECF versus discharge directly home after an elective TKA. **METHODS:** Patients  $\geq 40$  years old with a primary unilateral TKA, excluding those with a 2<sup>nd</sup> TKA surgery within the year, were retrospectively extracted from a clinical orthopedic database between September 1, 2008 – November 30, 2010. Discharge location and preoperative comorbidities (diabetes, hypertension, obesity [bmi  $> 30$  kg/m<sup>2</sup>], cancer, osteoporosis, chronic back pain, insomnia, osteoporosis) were obtained by chart abstraction from the electronic medical record. Using logistic regression analysis, odds ratios were adjusted for age, gender, preoperative patient education, levels of preoperative physical health and activity and insurance type (medicaid, medicare, private). **RESULTS:** A total of 174 patients with average age 63.8 years (SD 10.2, 41-85) were included in the study. Overall, one-third of patients (35.6%, 62) of patients were discharged to a ECF. In adjusted ORs, the likelihood of going to a ECF postoperatively were 3.23 times (95% confidence interval [CI]=1.27-8.16) more likely for those age  $\geq 65$  years compared to those  $< 65$  years; 2.86 times (95% CI =1.11-7.37) in patients with a diabetes and 2.99 (95% CI =1.15-7.80) times for those with a cancer diagnosis compared to those without diabetes and cancer, respectively. **CONCLUSIONS:** We identified specific patient variables that may predict postoperative discharge destination. Identification is paramount to avoid delays in patient discharge and to efficiently manage available resources.

### PSU34

#### RATES AND COSTS OF HOSPITALIZATION IN OBES PATIENTS WITH BARIATRIC SURGERY

Lao WL<sup>1</sup>, Chia J<sup>2</sup>, Globe D<sup>2</sup>

<sup>1</sup>University of Arizona, Tucson, AZ, USA, <sup>2</sup>Allergan, Inc., Irvine, CA, USA

**OBJECTIVES:** The goal of this study was to compare the health care resource utilization and costs between obese patients who received laparoscopic adjustable gastric banding (LAGB), laparoscopic Roux-en-Y gastric bypass (IRYGB), open Roux-en-Y gastric bypass (oRYGB), and sleeve gastrectomy (SG). **METHODS:** Marketscan claims data (2005 to 2010) were analyzed for patients  $\geq 18$  years old, who received LAGB, IRYGB, oRYGB, or SG (identified using ICD-9-CM and CPT codes) and remained continuously insured for  $\geq 12$  months following first date of surgery (index date). Patients with ambiguous bariatric procedure coding or stomach or intestinal cancer codes were excluded. **RESULTS:** A total of 52,359 claims met inclusion criteria: LAGB ( $n=21,075$ ), IRYGB ( $n=26,206$ ), oRYGB ( $n=4,497$ ), and SG ( $n=581$ ), averaging 44 to 46 years old and about 80% female. 35.5% LAGB had type II diabetes codes compared to IRYGB (40.6%), oRYGB (42.3%), and SG (40.8%). 10.0% of the LAGB patients were hospitalized within 12 months post-index date compared to IRYGB (17.4%), oRYGB (20.5%), and SG (13.8%). LOS were 4.9, 6.0, 9.3, and 10.0 days; total costs were \$21,242 vs. \$22,988; \$31,603; and \$35,631; respectively. In the diabetic subgroup, 12.1% LAGB, 19.2% IRYGB, 23.9% oRYGB, and 17.3% SG were hospitalized within 12 months. LOS were 5.4, 6.4, 10.4, and 11.3 days; total costs were \$22,840; \$24,816; \$37,698; and \$35,128; respectively. Similarly, out of those with 36-month follow-up data, 29.0% (1162/4012) LAGB patients were hospitalized compared to