CORRELATION OF WEIGHT TO CARDIOMETABOLIC RISK AS IDENTIFIED BY ICD-9 DIAGNOSIS CODES AND PRESCRIPTIONS IN PRIMARY CARE

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OBJECTIVES: This study evaluated the association of patients with a BMI > 27 kg/m² vs. a BMI *Y´18 and *U27 kg/m² with cardiometabolic risk factors (CMRFs). METHODS: A retrospective review of an Electronic Medical Record database containing ambulatory health record data for a nationally representative sample of over 5 million US citizens with a BMI *Y´18 kg/m² and *Y18 years of age was conducted. Patients with a valid BMI were included and stratified by no CMRFs or with one or more diagnoses or prescription orders associated with high triglycerides (TG), low high density lipoprotein (HDL), type 2 diabetes or hypertension two years prior to the last observation date.

RESULTS: A total of 499,594 patients were identified in the study where 56% (281,988) had a BMI > 27 with a CMRF distribution of none (49.79%) one (35.36%) two (13.01%), three (1.70%) or four (0.14%). Of those with one risk factor 141,852 (31.29%) had hypertension, 10,866 (2.90%) had diabetes, 3667 (0.92%) had increased TGs and 1201 (0.26%) had low HDL. Compared to patients with no risk factors patients with 1–4 risk factors were significantly more likely to be in the >27 kg/m² group in all cases (p < 0.001). Odds ratios were 2.64 for hypertension, 2.21 for elevated triglycerides, 1.91 for diabetes and 1.45 for low HDL; 3.58 for any 2 risk factors, 4.24 for any 3 risk factors and 5.07 for all 4 risk factors, relative to having no CMRFs. CONCLUSION: Patients with CMRFs including hypertension, elevated triglycerides, diabetes or low HDL were anywhere from 5.07 to 1.45 times more likely to be a BMI > 27. Diagnoses and treatments for CMRFs may be used as surrogate measures for the presence of obesity in claims data. Drugs that decrease both weight and improve CMRFs in such patients could be beneficial.

THE RELATIONSHIP BETWEEN OBESITY AND HEALTH-RELATED QUALITY OF LIFE IN PATIENTS WITH MODERATE TO SEVERE PSORIASIS OR RHEUMATOID ARTHRITIS

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OBJECTIVES: To explore the relationship between obesity and health-related quality of life (HRQoL) in patients with moderate to severe psoriasis (PsO) or rheumatoid arthritis (RA).

METHODS: A retrospective analysis on secondary clinical trial assessed 1205 PsO and 1988 RA patients using several approaches: (1) two univariate regression analyses [obesity predicting HRQoL; disease severity predicting HRQoL] and (2) a stepwise multivariate multiple regression analysis (MVA) to assess obesity as an independent predictor of HRQoL. Disease severity was measured using the PASI for PsO and DAS for RA. SF-36 was used for HRQoL assessment in both diseases.

RESULTS: Obesity and disease severity were found to be significant predictors of HRQoL. The stepwise MVA, using BMI, age, sex, disease duration and disease severity as predictors, revealed an overall significant effect in the PsO sample [components: L = 0.84, F (10, 2396) = 21.10, p < 0.0001; SF-36 domains: L = 0.73, F (40, 5198.6) = 9.54, p < 0.0001]. BMI added to the prediction of HRQoL over PASI for several SF-36 components and domains: PCS, MCS, PF, RE, SF, VT and MH. The results of the RA sample were similar: the overall MVA was significant [components: L = 0.74, F (10, 3962) = 64.05, p < 0.0001; SF-36 domains: L = 0.61, F (40, 8611.9) = 25.81]. Again, BMI added to the prediction of HRQoL over disease severity for MCS, PF and VT. Effect sizes in both samples were weak. CONCLUSION: Obesity was an independent predictor of HRQoL when using other covariates. This data indicates that reducing BMI and disease severity contribute significantly to the HRQoL of moderate to severe PsO and RA patients.

HOSPITAL COMPLIANCE WITH ACCP GUIDELINES FOR ANTI COAGULANT THERAPY AND JCAHO PERFORMANCE MEASURES

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OBJECTIVES: To (1) evaluate compliance with American College of Chest Physicians (ACCP) guidelines for anticoagulant therapy for prophylaxis or treatment of acute venous thromboembolism (VTE), and (2) to assess Joint Commission on Accreditation of Health care Organizations (JCAHO) performance measures for prevention and care of VTE. METHODS: A retrospective chart review was performed by pharmacists at 32 community hospitals using an online standardized medication use evaluation form. Compliance with ACCP recommendations was assessed on the basis of dosage, duration and type of anticoagulant used. The following JCAHO performance measures were calculated using standard definitions: #5-Objective confirmation of clinically suspected VTE, #8-Anticoagulation overlap of parenteral and warfarin therapy for patients with VTE, #9-VTE patients with therapeutic International Normalized Ratio (INR), #10-Platelet count monitoring for patients with VTE receiving unfractioned heparin (UFH), #11-VTE patients on warfarin with any INR ratio > 6 during hospitalization, #12-VTE patients with a calculated creatinine clearance of <30 ml/min that received reduced medication dosage, #13-VTE treatment for discharged patients with active cancer, #14-UFH management by nomogram/protocol, and #16-VTE education (inpatient). Results were expressed as proportions. RESULTS: A total of 902 cases were assessed. The mean age of the patients was 67.7 ± 16.9, 385 (42.7%) were males, and 104 (11.5%) had active cancer. 732 (81.2%) patients received prophylaxis of VTE while 170 (18.8%) received treatment for acute VTE. The average length of therapy and hospital stay was 5.7 ± 5.3 and 7.8 ± 7.2 days respectively. Anticoagulant therapy was consistent with ACCP recommendations in 78% of cases. Percent compliance with JCAHO measure #5, #8, #9, #10, #11, #12, #13, #14 and #16 were 82.9, 67.3, 28.0, 33.5, 0.0, 30.4, 14.7, 96.2, and 44.3 respectively. CONCLUSION: Anticoagulant therapy was in compliance with ACCP recommendations in majority of cases (78%). Performance with some JCAHO measures was less than optimal. Opportunities exist to improve the prevention and treatment of VTE.

COMPLIANCE AND PERSISTENCE WITH ASTHMA MEDICATIONS: IMPLICATIONS OF ASTHMA SEVERITY

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OBJECTIVES: To evaluate differences in medication compliance and persistence between patients with persistent (HP) and intermittent or non-persistent (HNP) asthma according to the Health
Plan Employer Data and Information Set (HEDIS) definitions, as well as among the classes of asthma medications. METHODS: A retrospective cohort analysis of the Integrated Health care Information Services (IHCIS) administrative database evaluated patients ≥/≤ 5 years of age with at least 2 prescriptions of asthma medication. Asthma severity was classified as HP (n = 21,698) or HNP (n = 11,967), in accordance with 2006 HEDIS criteria; compliance, calculated as medication possession ratios (MPR) and persistence, calculated as days supply before discontinuation, switching, or augmentation, were measured in patients treated with inhaled corticosteroids (ICS) (n = 3906 HP, n = 3856 HNP), leukotriene modifiers (LM) (n = 10,005 HP, n = 3823 HNP), and ICS + LABA combinations (n = 5893 HP, n = 3538 HNP) over a 1-year period. The study groups' comparisons were conducted using t-test or analysis of variance where appropriate. RESULTS: Overall, HP patients had higher MPRs with all categories of medication (71 ± 29%) compared with HNP patients (43 ± 27%, p < 0.001). Oral LM (78 ± 27% HP, 51 ± 29% HNP) were taken more frequently than ICS (55 ± 30% HP, 31 ± 21% HNP) or ICS + LABA combinations (65 ± 28% HP, p < 0.001, 43 ± 25% HNP, p < 0.001). Persistence was longer for LM (139 ± 110 days HP, 90 ± 86 days HNP), than for ICS (64 ± 72 days HP, 37 ± 32 days HNP), or ICS + LABA (106 ± 108 days HP, 66 ± 73 days HNP, p < 0.001 for both). CONCLUSION: Both compliance and persistence remained suboptimal in this large asthmatic population, with HNP patients far less consistent with their medication dosing and duration of use than HP patients. LMs were used more consistently than inhaled medications, with ICS being the least consistently used asthma medication. Additional measures are needed to improve compliance and persistence with these medications.

A DECISION TREE APPROACH TO ESTIMATING COST SAVINGS OF PAY FOR PERFORMANCE PROGRAMS IN A PPO SETTING

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OBJECTIVES: Pay-for-performance is gaining popularity and acceptance as an approach to improve quality and efficiency of health care in the U.S. However, little evidence regarding the economic feasibility of this approach is currently available in the literature. Our objective was to examine the cost savings of a quality-based physician incentive program implemented in a PPO setting. METHODS: Administrative claims data for 2003–2005 were obtained from a voluntary physician incentive program implemented by a large non-profit health plan in Hawaii and used to calculate all costs and probabilities included in the decision tree. Health plan members were categorized into two groups: those who visited only physicians who participated in the program and those who visited only non-participating physicians during the study period. Rates of recommended care for two evidence-based quality of care indicators—glycosylated hemoglobin testing and lipid panel testing for members with dia-}

betes—were compared between the two groups to determine program effectiveness. Program costs included administrative costs, the cost of quality of care evaluation, and physician reimbursement. Quality indicators that included several procedures were assigned a weighted average cost. One year events included severe diabetic complications. RESULTS: Average program cost per enrollee was $21; the average cost of receiving the two tests was $18; and the cost of developing relevant complications was $6470. With the incentive program, the health plan saved approximately $18 per adult diabetic considering just the two indicators (i.e., total program costs were distributed across just the two indicators for the purposes of this analysis), which translated to two year savings ranging from $2.5 to $6.7 million. CONCLUSION: Physician reimbursement models built upon evidence-based quality of care metrics may result in direct cost savings to the health plan within a relatively short follow-up time, in addition to positively affecting delivery of high quality, recommended care.

EVALUATION OF A MULTICENTER AND MULTIDISCIPLINARY CONGESTIVE HEART FAILURE MANAGEMENT PROGRAM

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OBJECTIVES: To investigate the impact of a multidisciplinary disease management program implemented in 3 different hospitals on the functional status, quality of life, and utilization of hospital resources for patients with congestive heart failure (CHF). The study also examined the financial outcomes of the program. METHODS: We evaluated the program by comparing the rates of readmission (CHF) within 3- and 12-month of initial discharge, the cumulative number of hospital days, the rate of ED visits and financial outcomes within 12 months of enrollment for 431 patients given a multidisciplinary disease management intervention against 141 patients who received usual care. Changes in functional outcomes of patients on the program were assessed at baseline and at six months using the 6-minute walk distance and the New York Heart Association (NYHA) Functional Classification. The Minnesota Living with Heart Failure Questionnaire was used to measure patients' quality of life. RESULTS: The intervention group had considerably and significantly lower hospital readmission rates than the control group (5.6% vs. 15.6% within 3 months, P = 0.001, 13.2% vs. 29.8% within 12 months, P < 0.001). The mean hospital days per patient was also reduced from 3.3 ± 11.2 to 1.0 ± 3.5 (P < 0.001). The number of emergency room visits (CHF) per patient was 46% lower for program patients. The mean 6-minute walk distance did not increase significantly from baseline (P = 0.065) whereas there was a 10% decline in NYHA score (P < 0.001) and a markedly improvement quality of life were registered (P < 0.001). The return on investment was calculated to be 0.82. CONCLUSION: The evaluation demonstrates that a multidisciplinary heart failure program led to improved functional status and better quality of life while at the same time reduced utilization of acute hospital resources.