activity at least three times a week. Obesity (OB) was defined by a binary indicator if body mass index was greater than 30. The structural parameter, average treatment effect (ATE) was defined as the impact of PA on obesity, if individuals are randomly assigned to PA. The second parameter average treatment in the treated (ATT) measure must account for impact on obesity status to become physically active, rather than for the population as a whole. To control for the unobservable factors affecting PA, we specified a recursive bivariate probit model. To avoid identification based on functional form, instruments added were presence of any limitations, and injury. Covariates included age, gender, race, education, geographical and metropolitan area location, smoking status, comorbidities and perceived physical and mental health.

RESULTS: Based on naïve probit model, the probability of obesity, evaluated at the means of the data, was 0.099 lower amongst those who were physically active (p < 0.05). Effect of selection bias was positive and significant (rho = 0.55 p < 0.001). Based on the recursive probit model, ATE was a 27.7% decrease (95% CI: -0.279 to -0.275) while ATT was a 38.8% decrease (95% CI: -0.391 to -0.385) in probability of obesity amongst those who were physically active. CONCLUSIONS: Unobservable heterogeneity may be masking the true effect of physical activity on obesity. According to this bias this confirms a significant protective effect of physical activity against the likelihood of obesity.

TREATMENT OF TRANSFUSIONAL IRON OVERLOAD IN PATIENTS WITH MYELODYSPLASTIC SYNDROME OR SEVERE ANEMIA: DATA FROM MULTICENTER CLINICAL PRACTICES

PSY12


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OBJECTIVES: Patients with myelodysplastic syndrome (MDS) or severe anemia requiring repeated transfusions of red blood cells (RBCs) risk developing transfusional iron overload (TIO), which can cause organ damage and reduce survival. Iron chelation therapy (ICT) has been shown to improve survival and quality of life in patients with TIO; however, ICT utilization in clinical practices is not well understood.

METHODS: The medical records of patients diagnosed with MDS or severe anemia 26 months before data extraction, aged ≥21 years at their diagnosis, received ≥1 RBC transfusion were reviewed. ICT-eligibility was defined as ≥220 units of RBCs transfused or ≥22 serum ferritin (SF) tests ≥2100 mg/dL. Study endpoint was ICT-treatment rate among ICT-eligible patients with lower-risk MDS (IPSS low or intermediate-1); WHO (RA, RARS, RCMD, RCMD-RS or 04); FAB (RA or RARS); Characteristics and survival of patients treated and untreated groups were described. RESULTS: Medical records data for 283 patients were extracted. Among 78 ICT-eligible patients with lower-risk MDS, only 32 (41%) received ICT. At ICT-initiation, treated patients received on average 13.3 transfusions (27.6 units) and mean first SF near ICT-initiation was twice the recommended level at 1949 mg/L. Median overall survival for all ICT-eligible patients was significantly longer for those ICT-treated than untreated (8.7 versus 4.7 years, log-rank p = 0.02; multivariate hazard ratio = 0.372, p = 0.03). CONCLUSIONS: This observational study finds only 41% of ICT-eligible patients with lower-risk MDS received ICT in clinical practice, and their treatment was initiated later than recommended. Among all ICT-eligible patients, those who received a ICT had a significantly better overall survival than untreated patients.

FREQUENCY AND BOTHERSOMENESS OF SIDE EFFECTS IN PAIN PATIENTS TAKING OXYCODONE IMMEDIATE RELEASE: IMPACT ON PRESCRIPTION AND OVER-THE-COUNTER MEDICATION USE

PSY13

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OBJECTIVES: Oxycodeone immediate release, alone or in combination (oxycodeon), is widely used to treat pain. However, oxycodeone is often associated with bothersome side effects, which may lead to increased medical resource use, including prescription and over-the-counter (OTC) medications. The objective of this first analysis was to assess the frequency and bothersomeness of side effects and other medication use among patients taking oxycodeone. METHOIDS: An online survey was completed by a nationwide convenience sample of patients currently taking oxycodeone for non-malignant pain. Detailed data on patient experience with oxycodeone were collected. A minimum sample size of 600 was determined to ensure reasonably accurate estimates. RESULTS: Among the 601 respondents [mean age of 45 years (range 18–86), 85.0% Caucasian, 69.1% female], almost half, 45.6%, were taking oxycodeone for back/neck pain, 16.8% for osteoarthritis/osteoarthrosis, 14.3% for pain due to injury/trauma, 10.5% for recent surgery, 7.2% for fibromyalgia, and 5.7% for neuropathic pain, respectively. The mean daily dose was 16.6 mg (range 2.5–200). Overall, 83.5% were bothered by side effects with 29.9% being moderately/extremely bothered. Over half, 53.1%, were bothered by constipation, almost one-third, 31.3%, by nausea, 27.6% by pruritus, and 14.8% by other, effect, among others. A significantly higher proportion of respondents bothered by side effects reported use of prescription (13.1% vs. 0%; p < 0.001) or OTC (20.5% vs. 9.1%; p < 0.007) medications to manage those side effects, compared to respondents neither bothered by side effects. CONCLUSIONS: The majority of survey respondents experienced side effects of oxycodeone, some of which led to the use of prescription and OTC medications. These results point to the potential benefits, both humanistic and economic, of better-tolerated pain medications. Further analyses of this data will assess the health status, pain intensity, and other resource utilization among oxycodeone users.

TOLERABILITY OF INTRAVENOUSLY ADMINISTERED IMMUNE GLOBULIN IN THE HOME SETTING

PSY14

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OBJECTIVES: Patients with primary immune deficiencies and many neurological disorders are frequently treated with immune globulin, administered intravenously or subcutaneously. The aim of this study was to evaluate tolerability of intravenously administered immune globulin products in patients in the home setting. METHODS: A retrospective, longitudinal cohort analysis of patients (18 years and older) provided intravenous immunoglobulin (IVIG) using data from the AcroMed Therapeutics electronic medical record was conducted. Inclusion criterion was infusion of at least one dose of IVIG during the study period. Patients were followed from July 1, 2007 to June 28, 2008. Three components to estimate tolerability were evaluated. The first was aggregate adverse drug event rate. The second was infusion completion rate (ICR), calculated by dividing the number of successful infusions by the number of attempted infusions. The third measure was a managed therapy completion rate (MCTC-A) for patients that had an identified ADE and were still managed to completion of therapy. RESULTS: The sample size for review was 33,065 doses of IVIG dispensed during the study period. The results based upon the three measures of tolerability were: 1) an ADE rate of 2.35% (95% CI: 1.79%–2.95%) based on 778 reported adverse drug events; 2) an infusion completion rate (ICR) of 99.74% (95% CI: 99.65%–99.82%); and 3) a managed through completion of therapy (MCTC-A) of 88.6% (95% CI: 80.8%–92.3%). Gender, age, diagnoses and BMI were also evaluated for their effect upon tolerability of infusion. CONCLUSIONS: Intravenous administration of immune globulin is an important alternative infusion option for patients. Patients can be well managed in the home on intravenously administered immunoglobulin. These findings contribute to previous research related to safety of administration of immunoglobulin in the home.

SYSTEMIC DISORDERS/CONDITIONS – Cost Studies

PSY15

THE IMPACT OF ADHERENCE ON THE COSTS AND BENEFITS OF INTENSIVE LIFESTYLE MANAGEMENT (ILM) IN OVERWEIGHT AND OBSESE PATIENTS AT HIGH RISK FOR TYPE-2 DIABETES MELLITUS (T2DM)

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OBJECTIVES: The Diabetes Prevention Program (DPP) demonstrated that ILM can reduce lipid values, reduces blood pressure and reduces the risk of developing T2DM. Controversy over magnitude of whether these benefits can be achieved cost-effectively has diverted attention from questions about the generalizability of the results. The high rate of treatment adherence in the DPP may not be reproducible in actual practice. The objective of this study was to assess the impact of treatment adherence to ILM on estimates of health benefits and costs for a cohort of overweight and obese patients at high risk of developing T2DM. METHODS: The IHE/IN weight management model, a Markov-based, micro-simulation model that includes mortality, co-morbidities and risk factors, was used to simulate the health outcomes of ILM over 25 years for 500 cohorts of 1,000 hypothetical overweight and obese pre-T2DM patients. Efficacy and baseline population characteristics were taken primarily from the DPP. Costs for ILM and care associated micro- and macro-vascular complications and other co-morbidities as well as quality-of-life data was obtained from existing literature. Four scenarios were assessed: adherence as observed in the DPP and reductions in the DPP adherence rate by 25%, 50%, and 75%. RESULTS: In all, ILM resulted in 19.96 undiscounted life years (LYs), 18.03 undiscounted quality-adjusted life years (QALYs), at a cost of $78,965, assuming DPP-like adherence. Forty percent of the cohort ultimately developed T2DM. Reducing adherence by 25%, 50%, and 75% reduced LYs by 0.17, 0.29, and 0.40, QALYs by 0.36, 0.68, and 1.03, and increased costs by $2154, $4190, $6813, respectively. The rate of T2DM transition increased by 5, 10, and 15 percentage points, respectively. CONCLUSIONS: Patient adherence is an important driver of the benefits and costs of ILM and should be considered explicitly in cost-effectiveness analyses.

A CANADIAN BASED PHARMACOECONOMIC ANALYSIS OF SELECTED ANTICONVULSANTS, SNRIS AND TCAS IN TREATING NEUROPATHIC PAIN

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OBJECTIVES: Neuropathic pain starts as or is caused by a primary lesion or dysfunction in the nervous system. It impacts use of health care resources and may incur employment disruptions. The primary goal in managing neuropathic pain is to make it more tolerable. Three classes of atypical medications, anticonvulsants (A+Cs), sero-