towards patient discharge coordination to ensure patients feel equipped to continue post discharge care at home.

Patient Behavior Studies

PB1
DIFFERENCES IN ADHERENCE AND HEALTHCARE UTILIZATION BETWEEN USERS OF ANALOG VIAL, ANALOG PEN, AND HUMAN INSULIN

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Objectives: Analog inulin is newer, costlier, and now more widely used than human insulin in the U.S. This study aimed to compare insulin adherence and healthcare utilization between users of analog and human insulin using real-world data. ***Methods:*** This retrospective cohort study used 2016-2018 Tennessee Medicaid claims data to identify patients with type 2 diabetes and capture their insulin prescription fills and healthcare utilization. U.S. adults aged ≥ 18 years who were on analog insulin vial (AV), analog insulin pen (AP), or human insulin (HI) with ≥ 6 months of continuous enrollment after their first filled insulin prescription were included. Patients with proportion of days covered value ≥ 80% in 6-month baseline period were considered adherent. Healthcare utilization was assessed through numbers of ED visits and hospitalizations in 6-month follow-up period. Logistic regression and negative binomial regression determined associations between insulin type and insulin adherence or healthcare utilization, respectively. ***Results:*** The study included 2,763 individuals, including 69.8% female, 55.2% African-American, and 88.6% health professional shortage area residents. Insulin adherence was observed in 685 patients. AV users were less likely to be adherent compared to HI users (OR: 0.685, 95% CI: 0.527-0.889). Odds of adherence increased with age (OR: 1.028, 95% CI: 1.020-1.036) and use of additional antidiabetics (OR: 1.194, 95% CI: 1.080-1.319). AV users had higher odds of ED visits than HI users (OR: 1.288, 95% CI: 1.033-1.610). No significant associations with hospitalizations were seen. However, AP users were less likely to be hospitalized than HI users (OR: 0.618, 95% CI: 0.391-0.975). The odds of an ED visit and hospitalization decreased with age but increased with comorbidity burden. ***Conclusions:*** HI and AP may have higher real-world benefit compared to AV in patients at risk for disparities. Providers and payers should consider the differences in real-world benefit in selecting the right insulin for patients.

PB2
REAL-WORLD ADHERENCE TO SINGLE-INHALER FLUTICASONE FUROATE/UMECLIDINIUM/VILANTEROL VERSUS MULTIPLE-INHALER TRIPLE THERAPY AMONG ASTHMA PATIENTS IN THE US

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Objectives: Guidelines recommend triple therapy for asthma patients who remain uncontrolled on inhaled corticosteroid(ICS)/long-acting beta-agonists(LABA). A previous real-world study reported low adherence/persistence to multiple-inhaler triple therapy (MITT); however, single-inhaler FF/UMEC/VI has not been assessed. This study compared adherence and persistence among asthma patients receiving FF/UMEC/VI or MITT in a large US claims database. ***Methods:*** Retrospective cohort study conducted using US-based claims data on asthma patients initiating FF/UMEC/VI 100/62.5/25mcg or MITT between 09/18/2017-09/30/2019. Index date=-first dispensing date for FF/UMEC/VI or first overlap in days supply of ICS, LABA, and long-acting muscarinic antagonist (LAMA). Subjects were ≥18 years old at index, continuously enrolled for ≥12 months pre-index (baseline) and ≥3 months post-index, and had ≥1 asthma diagnosis during baseline/index. Patients with baseline use of MITT or FF/UMEC/VI, or diagnosed with COPD, cystic fibrosis, or acute respiratory failure were excluded. Study endpoints: adherence measured by mean proportion of days covered (PDC), proportion achieving PDC≥0.8 and PDC≥0.5, and persistence (reported with Kaplan-Meier rates). Inverse probability of treatment weighting (IPTW) was used to control for confounding and post-weighting multivariable regression further adjusted for remaining differences in baseline characteristics. ***Results:*** In total 1,396 FF/UMEC/VI and 5,115 MITT initiators met study criteria. After IPTW, cohorts were balanced across most covariates. Among patients with ≥12 months follow-up, FF/UMEC/VI initiators (N=524) had significantly higher mean PDC over 12-months than MITT initiators (N=2,666) (mean[SD]: 0.46[0.33] vs 0.35[0.30],p<0.001). FF/UMEC/VI initiators had significantly higher adherence rates versus MITT initiators at 12 months (PDC≥0.80: 24.7% vs 12.9%; RR[95%CI]=2.01[1.61-2.60],p<0.001; PDC≥0.50: 38.3% vs 27.2%; RR [95%CI]=1.48[1.19-1.80],p<0.001). Additionally, FF/UMEC/VI initiators were more likely to persist on their treatment compared to MITT initiators at 6-months (40.5% vs 26.9%; HR[95%CI]=1.52[1.41-1.64], p<0.001) and 12-months (25.9% vs 15.1%; HR[95%CI]=1.49[1.39-1.60], p<0.001). ***Conclusions:*** Asthma patients initiating triple therapy with single-inhaler FF/UMEC/VI had higher adherence and persistence compared to patients initiating multiple-inhaler triple therapy. Funding: GSK-sponsored (Study HO-18-18555/208189)

PB3
REAL WORLD ADHERENCE, PERSISTENCE, RELAPSE AND MULTIPLE SCLEROSIS SYMPTOMS AMONG PATIENTS TREATED WITH ORAL DISEASE-MODIFYING THERAPIES

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Objectives: To evaluate real world adherence, persistence, relapse, physical disability, and neurological impairment among patients with multiple sclerosis (MS) treated with oral disease-modifying therapies (DMTs). ***Methods:*** Adults (≥18 years) with ≥2 ICD9/10 codes for MS from 01/2016 to 12/2018 were identified from the Optum Non-Affiliate claims database. Patients on oral DMTs were attributed to drug cohorts based on their first (index) DMT prescription. Patients were required to have ≥12 months of continuous enrollment before and after index date. Demographic characteristics were assessed during the baseline period (1 year before index DMT). Adherence to index DMT was assessed with possession ratio (MPR) and persistence (<90-day gap allowed) in the first year of follow-up. Also, relapse, physical disability and neurological symptoms were identified. MS relapse was defined by inpatient hospitalization with primary diagnosis of MS or relapse drug claim within seven days of MS-related outpatient visit or administration of high doses steroids IV or plasmapheresis procedure for >2 days. ***Results:*** 1,952 patients initiated oral DMTs including fingolimod hydrochloride (26%), dimethyl fumarate (54%), and teriflunomide (20%). Patients had a mean age of 47 (SD: 11) years; 76.13% were female; with a mean Charlson Comorbidity Index score of 0.5 (SD: 1) in the baseline period. MPR≥80% to index DMT was exhibited by 88% of the patients, and 74% were persistent to their index DMT. During follow-up, 11% of patients had one or more study-qualifying relapses with a mean annualized relapse rate of 0.19 (SD: 0.64). Physical disability was captured as spasticity (35%), bladder dysfunction (20%), visual impairment (17%), mobility impairment (2%), and cognitive/behavior dysfunction (11%). Neurologic impairment was captured as pain (31%), depression (12%), and sensory disturbances (33%). ***Conclusions:*** Despite high persistence and adherence to oral DMTs, the breakthrough symptoms of physical disabilities and neurological impairment indicate a significant unmet need in the treatment of MS.

PB4
PATIENT PERSPECTIVES ON IMPLEMENTATION OF A LONG-ACTING INJECTABLE ANTIRETROVIRAL THERAPY REGIMEN IN HIV US HEALTHCARE SETTINGS: FINAL MONTH 12 RESULTS FROM THE CUSTOMIZE STUDY

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Objectives: Cabotegravir and rilpivirine long-acting (CAB+RPV LA) administered by monthly injection has demonstrated non-inferiority compared to standard daily oral antiretroviral therapy (ART). Patient perspectives after one year of implementation of CAB+RPV LA in US healthcare settings were evaluated in an innovative implementation-effectiveness study (CUSTOMIZE). ***Methods:*** This single-arm study enrolled virologically suppressed patients to receive monthly CAB+RPV LA across eight US clinics. Surveys were administered at Baseline (BL) prior to first injection, Month 4 (M4) and Month 12 (M12) to evaluate patient experience with CAB+RPV LA implementation. ***Results:*** At BL and M12, 109 and 102 patients completed surveys, respectively (BL: 87% male; 59% Caucasian; 27% Hispanic/Latino; mean age 39 years). At M12, majority (87%) reported monthly clinic visits and time spent in the clinic (93%) were very/extremely acceptable (M4: 84% and 89%, respectively). Most patients (64%) reported spending ≤30 minutes on average in clinic for each injection visit; 82% reported spending ≤15 minutes in the exam room waiting for the injection. Majority (92%) reported preferring CAB+RPV LA over daily oral tablets. At M12, 74% reported that nothing is interfering with their ability to receive CAB+RPV LA (M4: 66%). Injection pain/soreness was the most common worry at BL (58%); by M12, 15% reported this concern. Through M12, 94% of expected injections (1076/1140) occurred within the +/- 7 day dosing window, 4% were early, <1% were late, <1% were missed due to COVID but covered with short term oral ART. At M12, 97% stated they will use CAB+RPV LA injection treatment going forward. ***Conclusions:*** Most patients had no challenges with receiving monthly CAB+RPV LA dosing and reported monthly appointments and time spent in clinic to be highly acceptable after one year. Final implementation data suggest CAB+RPV LA is a convenient, appealing alternative treatment option for patients, with the vast majority preferring CAB+RPV LA over daily oral ART.