Compliance was calculated during the year after the initiation of the LAI-AP using the medication possession ratio (MPR). Patients were considered compliant if they had a MPR of at least 0.80. Treatment compliance to oral antipsychotics used in the year prior the initiation of the LAI-AP was also evaluated. **RESULTS:** A total of 1,992 patients met the inclusion criteria. The mean age was 43.5 years (SD=14.3) and 66.2% of the patients were male. A total of 546 patients (27.4%) received an oral antipsychotic at the first date of dispensation of LAI-AP. The average persistence with LAI-AP was 217.2 days (SD=144.2). The mean MPR over the 1-year period following the initiation of LAI-AP was 0.58 (SD=0.35) for the overall cohort, with 37.5% of patients being compliant with a MPR of 0.80 or more, while in the year before the initiation of LAI-AP treatment compliance with oral antipsychotics was 29.0% (p<0.001). **CONCLUSIONS:** Treatment persistence and compliance represent significant issues in the treatment of schizophrenia/schizoaffective disorders. The initiation of a LAI-AP significantly improved treatment compliance among these patients.

PMH83

TREATMENT PATTERNS OF PATIENTS RECEIVING PALIPERIDONE PALMITATE IN AN INPATIENT SETTING

Lafeuille MH[1], Fortier J[1], Grittner AM[1], Muser E[2], Fastenau J[2], Duh MS[3], Lefebvre P[1]
[1]Groupe d'analyse, Ltée, Montréal, QC, Canada, [2]Janssen Scientific Affairs, LLC, Titusville, NJ, USA, [3]Analysis Group, Inc., Boston, MA, USA

OBJECTIVES: To analyze treatment patterns of patients receiving paliperidone palmitate (PP) in the inpatient setting. **METHODS:** Hospital discharge and billing records from the Premier Perspective Comparative Hospital Database (1/2009-3/2012) were analyzed for adult patients who had a hospitalization (index hospitalization) with a schizophrenia diagnosis (ICD-9: 295.x), and who received their first inpatient PP treatment without evidence of prior inpatient treatment with other long-acting antipsychotics (AP). Patients with only a schizoaffective disorder diagnosis (ICD-9: 295.7) during index admission and patients discharged to a psychiatric institute were excluded. Length of stay (LOS), time to first PP, and PP dosage frequency and strength were used to describe treatment patterns. Statistical comparisons were conducted between patients receiving one versus multiple PP doses during hospitalization using Wilcoxon rank-sum tests. No adjustment was made for multiplicity. **RESULTS:** A total of 374 hospitalized patients treated with PP were identified. Mean LOS was shorter for one-dose (N=228) relative to multiple-dose (N=146) patients (11.4 vs. 16.7 days, p<0.0001) and mean time to first PP was 7.7 and 6.5 days (p=0.0161), respectively. Earlier first PP administration was associated with shorter LOS (Spearman rank correlation tests: 0.6953 (p<0.0001) for the one-dose and 0.5897 (p<0.0001) for the multiple-dose cohorts). Among one-dose patients, 48.2% received a first injection of 234mg. Most multiple-dose patients received a first dose of 234mg (70.5%) followed by 156mg (71.2%) as a second dose. The mean (SD) time to second PP injection was 5.93 (2.59) days. **CONCLUSIONS:** 39% (146 of the 374 patients) of PP patients received multiple PP doses during their inpatient stay and had a shorter mean time to treatment initiation compared to one-dose patients. Most of these patients received the labeled initiation regimen (234mg followed by 156mg dose). In both dose cohorts, shorter time to treatment initiation was associated with shorter LOS.

PMH84

SOCIAL NETWORK ANALYSIS OF PRESCRIPTION PATTERNS

Talbert J, Nagarajan R
University of Kentucky, Lexington, KY

OBJECTIVES: The abuse of prescription opioids in the United States leads to more than 16,000 deaths each year, about one death every 35 minutes (Paulozzi et al., 2011). Our objectives are to develop a novel social network analysis methodology to *identify and measure prescription drug abuse.* **METHODS:** Prescription data were retrieved from a large insurance provider for the state of KY and consisted of prescriber IDs, patient IDs, and location across a spectrum of drugs (Schedule drugs, and a set of 'control group' products). Network abstractions of the prescribers were generated. Surrogate testing in conjunction with community structure detection algorithms were used to investigate possible non-random structure of the prescription patterns and identify aberrant prescribers. The results of the network analysis were visualized using Geo-spatial layouts based on latitude/longitude. **RESULTS:** Network abstractions of the prescribers revealed intricate wiring patterns across schedule drugs unlike those of the drugs in the control group. Surrogate testing clearly established significant non-random structure in these networks in contrast to those that can be generated by random graph realizations. Aberrant prescribers were subsequently flagged. Non-random structure was accompanied were accompanied by highly connected prescribers and hub-like structure. Geo-spatial layout of the scheduled drug networks revealed the dominant prescribers to be spread across major cities and patient movements across prescribers over large distances. Lack of wiring across the drugs in the control group indicated that patients taking these drugs do not move across prescribers unlike those taking schedule drugs. **CONCLUSIONS:** Our results provide system-level insights into prescription patterns and supplements traditional approaches that investigate aggregate statistical measures across the prescribers in isolation. Its ability to identify non-random structure and discern such structures across the various drug classes is noteworthy. We believe the proposed approach may prove to be a useful tool in implementing effective policies to reduce prescription drug abuse, diversion, and overdose

PMH85

OFF-LABEL PRESCRIBING AND POLYTHERAPY OF ATYPICAL ANTIPSYCHOTCS: A DOUBLE WHAMMY FOR DEMENTIA RESIDENTS IN NURSING HOMES?

Shanbhag P[1], Majethia U[2], Nayak R[3]
[1]St. Johns University, Fresh Meadows, NY, USA, [2]Eisai Inc, Woodcliff Lake, NJ, USA, [3]St. John's University, Jamaica, NY, USA

OBJECTIVES: Inappropriate use of Atypical Antipsychotics (AAPs) in elderly nursing home residents is a growing problem in geriatric medicine. The current study investigated clinically irrational prescribing of AAPs to elderly nursing home residents in the treatment of dementia-related psychosis particularly in two forms: i) off-label prescribing-i.e., prescribing AAPs for an unapproved indication against FDA-issued warnings on the product label and, ii) polytherapy-i.e., concurrent use of two or more AAPs contrary to evidence-based treatment guidelines. **METHODS:** The study utilized a sample of nursing home residents, obtained from 2004 National Nursing Home Survey database (NNHS). The study sample included residents aged 65 and over, with at least one prescription for a currently marketed AAP and having a primary diagnosis of dementia in accordance with ICD-9 codes. Off-label prescribing and polytherapy with AAPs served as the study dependent variables, along with a systematic analysis of demographic, clinical, social and other factors. **RESULTS:** Out of 13507 nursing home residents in the database, 4955 individuals (36.6%) had a primary diagnosis of dementia. About 32% of these were prescribed at least one AAPs and less than 1% also used an additional AAPs. Elderly who were aged 80 years and over was the group with most prescriptions for AAPs (49%). In a specific population affected by schizophrenia and bipolar disorder, where AAP polytherapy may be clinically justified (58%) had a prescription for at least one AAP, with olanzapine (28%) being the most prescribed. About 7% of this population was also concurrently taking at least two AAPs. **CONCLUSIONS:** Overall, the use of polytherapy appears to be negligible in the sample diagnosed with dementia. However, in nursing home residents with co-morbidities, polytherapy with AAPs appears to be more pronounced compared to the larger dementia population. In addition, off-label prescribing seems widespread particularly in older population diagnosed with dementia.

SYSTEMIC DISORDERS/CONDITIONS – Clinical Outcomes Studies

PSY1

ASSESSMENT OF STRUCTURED EMR DATA'S ABILITY TO PREDICT OR IDENTIFY OPIOID ABUSE IN PATIENTS ON CHRONIC OPIOID THERAPY

Hylan TR[1], Von Korff M[2], Saunders K[2], Masters ET[1], Palmer R[1], Carrell D[2], Mardekian J[1], Donevan S[1], Gross D[1]
[1]Pfizer, Inc., New York, NY, USA, [2]Group Health Research Institute, Seattle, WA, USA

OBJECTIVES: Assess ability of structured electronic medical record (EMR) data to predict or identify a measure of Clinician Labeled Opioid Abuse (CLOA) derived from clinicians' unstructured EMR notes for patients on Chronic Opioid Therapy (COT). **METHODS:** Study subjects included 2,752 chronic non-cancer pain patients initiating COT during 2008-10 at Group Health Cooperative (Seattle, WA) who received at least 2 quarters of COT (≥ 70 days' supply of an opioid in a quarter) within a one-year period. CLOA was derived using Natural Language Processing (NLP) techniques based on a custom dictionary of 792 terms to identify mentions of opioid addiction, abuse, and overuse written in the clinician's free text clinical notes in the patient's EMR. CLOA was validated by computer-assisted manual review of NLP positive clinical EMR notes. We developed an opioid abuse risk score from structured EMR data for the two year period prior to COT Initiation ("prior" model), and an opioid abuse risk score from structured EMR data from the quarter of COT initiation through December 2012 ("concurrent" model). Using logistic regression, we predicted CLOA status from the prior and concurrent opioid abuse risk scores in both learning and validation samples. **RESULTS:** In the sample, 100 (3.6%) patients had CLOA, but only 51% of these patients had an ICD-9 diagnosis of opioid abuse in concurrent EMR data. The "prior" risk score from structured data predicted CLOA with an area under the curve of 0.75 in the learning sample and 0.74 in the validation sample, while the "concurrent" risk score developed from structured data identified CLOA with an area under the curve of 0.84 in the learning sample and 0.88 in the validation sample. **CONCLUSIONS:** Preliminary results suggest moderate ability of prior structured EMR data to predict CLOA and good ability of concurrent structured EMR data to identify patients with CLOA.

PSY2

THE OVERALL RESPONSE RATE OF AZACITIDINE IN PATIENTS WITH INTERMIDIATE-2 AND HIGH RISK MYELODYSPLASTIC SYNDROMES: A RETROSPECTIVE CHART REVIEW STUDY FROM GREECE

Pappa V[1], Fragoulakis V[2], Maniadakis N[2], Briasoulis E[3], Tsionos K[4], Kioumi A[5], Vervesou E[6], Symeonidis A[7]
[1]University General Hospital ATTIKON, Athens, Greece, [2]National School of Public Health, Athens, Greece, [3]University Hospital of Ioannina, [4]Hellenic Air Force General Hospital 251, [5]General Hospital of Thessaloniki 'Papageorgiou', [6]Hospital "Henry Dunant", [7]University of Patras Medical School, Patras, Greece

OBJECTIVES: To estimate the overall response rate [Complete Remission-(CR), Partial Remission-(PR), Marrow-CR (MCR)] and Hematologic improvement-(HI) according to the International Working Group 2006 criteria to treatment with azacitidine amongst patients with Intermediate-2 or High- risk Myelodysplastic Syndromes (MDS), in a real world setting in Greece. **METHODS:** A nationwide, retrospective chart review study was conducted, based on 17 Hematology departments of Hospitals throughout the country. In one single visit the physicians recorded all the pertinent data available in the patient's medical records. In accordance with the inclusion criteria, patients recruited were ≥18 years of age and alive at the time of their data collection, had completed at least one evaluation after azacitidine treatment initiation, and received at least one cycle of azacitidine treatment regardless of outcome. Patients also gave signed informed consent for blinded analyzation of their medical data. Eligible patients had been treated with azacitidine under the terms of the locally approved indication (75 mg/m² SC per day for 7 days every 28 days). **RESULTS:** 53% of the participating physicians were located in Attica and enrolled 36% of patients. The mean age of 88 patients was estimated at 72.8+ 8.2, with 83% of them aged >65 years, while the male/female ratio was 2.5. The overall response rate was determined at 37.7% and was higher for High-risk MDS patients (46.2%) compared with Intermediate-2 patients (35.5%). Among the responders, 87% had Refractory Anemia with Excess Blasts -RAEB-2, 8.7% had RAEB-1 and 4.3% had Refractory Cytopenias with Unilineage Dysplasia. The median number of treatment cycles received to achieve CR, PR, or