

matched JC and non-JC patients to evaluate effectiveness of the program is ongoing. **RESULTS:** A total of 102 JC patients were included (15 continuous users and 87 new users). The mean age was 41 years (SD=13), 63% were males, 64% were covered by Medicaid, or Medicare, or dually covered, 63% lived with family/friends and 29%, 30% and 25% had comorbidity conditions of depression, anxiety and bipolar disorder, respectively. In the pre-index period, 22% of JC patients had any use of inpatient hospitalization, emergency room (ER) or crisis stabilization unit (20%, 1% and 5%, respectively) and 77% had outpatient visits. Pre-index oral atypical antipsychotics (73%) and antidepressants (59%) were commonly used. In the post-index period, 18% of patients had any use of inpatient hospitalization, ER or crisis stabilization unit (15%, 2% and 3%, respectively) and 84% had outpatient visits. Post-index oral atypical antipsychotics and antidepressant use was 59% and 57%, respectively. **CONCLUSIONS:** Preliminary evidence shows numerically lower inpatient, ER and crisis unit utilization from pre- to post-index period among schizophrenia JC enrollees.

PMH67

MEDICATION USE PATTERNS, HEALTH-CARE RESOURCE UTILIZATION AND ECONOMIC BURDEN FOR PATIENTS WITH SCHIZOPHRENIA IN BEIJING, CHINA

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OBJECTIVES: To explore medication use patterns, health-care resource utilization and economic burden among patients with schizophrenia in Beijing, China. **METHODS:** A retrospective analysis was performed using the Beijing Urban Employee Basic Medical Insurance Database from January 1, 2011 to December 31, 2013. Patients diagnosed with schizophrenia were identified using the International Classification of Disease 10th diagnosis codes F20, and the first diagnosis date in 2012 was designated as the index date. Patients were required to be at least 18 years old, without any cancer and with 12-months continuous enrollment after the index date. Descriptive statistics were used to describe patient profiles, medication usage, health-care resource utilization and annual direct medical costs during the 1-year follow-up period. **RESULTS:** A total of 17,609 patients were included with mean (±SD) age of 52 (±15) years, 54% females and 94% with the baseline medical comorbidities. During the study follow-up, 75% received antipsychotic monotherapy and 84% were treated with atypical antipsychotics. The proportion of patients with schizophrenia-related hospitalization was 9.6%, with 1.2 (±0.5) hospitalizations per patient-year, 118 (±98) days of total length of hospitalization stay per patient-year, and a 21% re-admission rate. Those with any schizophrenia-related outpatient visit had 5.7 (±4.4) outpatient visits per patient-year, with 82% having at least 2 outpatient visits. The all-cause annual direct medical costs per patient were \$2,668 (±3,511), while schizophrenia-related annual costs were \$950 (±2,150). The costs per schizophrenia-related hospitalization were \$4,050 (±3,592), with 10% of costs attributable to antipsychotics and 81% to non-medication medical costs. **CONCLUSIONS:** In Beijing, patients diagnosed with schizophrenia had a low rate of schizophrenia-related hospitalization, and a high rate of medical co-morbidities. Most patients received antipsychotic monotherapy and atypical antipsychotics. The economic burden associated with schizophrenia was considerable.

PMH68

CLINICAL ASPECTS OF INTERNET ADDICTION AMONG STUDENTS: IS IT DISORDER OR TREND OF THE TIMES?

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OBJECTIVES: To investigate Internet addiction (IA) among the students of three major universities: Astana Medical University (Kazakhstan), Ukrainian Medical Stomatological Academy (Ukraine) and Tashkent Institute of Railway Transport Engineers (Uzbekistan). **METHODS:** Our study was based on a questionnaire, which included two sections: demographic part and a traditional K.Yang's questionnaire. Problematic Internet Use (PIU) indices were calculated according to 4 scales: social comfort, loneliness, distraction, and impulsiveness. We used Student's t-test, Spearman's rank correlation coefficient and Cronbach alpha coefficient. **RESULTS:** The majority of male and female students reported about using Internet five or more times a week. It was detected a statistically significant difference between men and women according to the latter type of activity, where females were more likely to use the Internet for entertainment than males (p<0.05). Data showed statistically significant differences among men. The same comparison among women did not find any significant differences. IA disorder can lead to "Dry eye" syndrome, carpal tunnel syndrome (6.8%), neuroses, backaches and neckaches among young people. One of four respondents noted that they had an experienced pain, numbness in hands and wrists. Almost half of the students complain that they are concerned about their eyesight. The high value of the Spearman rank correlation coefficient (ranging from 0.91 to 0.99) testifies about the inverse association between the number of answers and their rank. **CONCLUSIONS:** When all results were compared, statistically significant differences of the comparative characterization of PIU among students by gender did not found (p> 0.05). The null hypothesis, which has proved the lack of differences in indicators of addictive behavior among students, is not confirmed. We found higher PIU indices among Kazakhstani students in the category of Social Comfort, in comparison with the students from Uzbekistan, having high PIU indices in the category of Diminished Impulse Control.

PMH69

RACIAL/ETHNIC DIFFERENCES IN THE USE OF COMPLEMENTARY AND ALTERNATIVE MEDICINE IN ADULTS WITH MODERATE MENTAL DISTRESS: RESULTS FROM 2012 NATIONAL HEALTH INTERVIEW SURVEY

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OBJECTIVES: While some complementary and alternative medicine (CAM) modalities are known to be effective in treating and/or managing anxiety and depression, relatively little is known about the patterns of CAM use among U.S. adults with moderate mental distress (MMD). We (1) examined whether the prevalence rates of CAM use varies by race/ethnicity in U.S. adults with MMD, and (2) assessed which socio-demographic and health-related factors are associated with CAM use among these racially/ethnically diverse groups. **METHODS:** We used data collected from 2012 National Health Interview Survey (NHIS), which represents non-institutionalized U.S. adults with MMD (n=6,016 unweighted). Using a cross-sectional design with survey data analysis techniques, we conducted descriptive analyses for prevalence rates of CAM use and multivariate logistic regression analyses to predict CAM use. **RESULTS:** Among adults with MMD, the overall prevalence of past year CAM use was significantly different across racial/ethnic groups (P<0.0001), with Asians (44.7%) and others (46.8%) having the highest prevalence rates. Blacks and Hispanics had prevalence rates of 24.3% and 30.7%, respectively, which were lower than non-Hispanic Whites (44.3%). When controlling for other relevant factors, being younger in age (18-64), being female, living in the West, having higher educational attainment, being employed, having more than four ambulatory care visits and functional limitations were significantly associated with higher odds of CAM use (P<0.05). **CONCLUSIONS:** Racial/ethnic differences exist in CAM use among U.S. adults with MMD. We also observed factors associated with higher odds of such CAM use, such as age, gender, geographic location, employment status, frequent ambulatory care visits, and functional limitations. To improve patient-centered mental health care, which may include integration of CAM use, mental health professionals and researchers should acknowledge that racial/ethnic differences exist in CAM use. Further studies are needed to explore why such patterns exist, and consequently, affect racial/ethnic minorities' mental health.

PMH70

AN EXAMINATION OF PATIENTS WITH OBESITY AMONG A NATIONALLY REPRESENTATIVE POPULATION: COMORBIDITY, HEALTHCARE COSTS AND SATISFACTION

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OBJECTIVES: The objective of this study was to examine the impact of obesity on one's physical and mental health, healthcare costs and satisfaction with their healthcare. We hypothesized that obese respondents would report worse physical and mental health, higher medical costs and poorer satisfaction with their healthcare than patients without a diagnosis of obesity. **METHODS:** A representative (U.S.) sample of 5,000 adults completed an online survey regarding their health and healthcare. We compared respondents who were previously diagnosed with obesity to those who were not. We conducted bivariate analyses and multivariate logistic regression to assess the relationship between obesity and the outcomes of interest. **RESULTS:** 12% (n=609) of respondents reported having been diagnosed with obesity. In bivariate analysis obese respondents reported worse overall physical health (p<.00001) and mental health (p<.0001). Additionally, respondents with a diagnosis of obesity were more likely to screen positive (20.8% vs 12%) on the PHQ-2 depression screener (p<.05). While out of pocket costs were significantly higher in obese respondents (p<.05), non-obese respondents tended to report paying more for their health insurance premiums (p<.05). Obesity was also associated with having more comorbid conditions (2.7 vs 1.9 respectively; p<.0001). Levels of satisfaction with the health system, their healthcare plan and healthcare provider between the groups varied. Multivariate analyses controlling for potential confounding factors, including comorbidities, as expected impacted these findings and will be presented. **CONCLUSIONS:** Obesity is a public health epidemic and contributes to poor health outcomes. As the U.S. healthcare delivery system moves toward population based health care approaches, more research among obese individuals is needed to better understand the association between obesity and poor outcomes but also the relationship with other independent predictors that can be modified or addressed to enhance the health of our nation.

PMH71

USE OF CLOZAPINE AND ANTIPSYCHOTIC POLYPHARMACY AMONG PATIENTS WITH SCHIZOPHRENIA: CHARACTERIZING THE PRESCRIBERS

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OBJECTIVES: Underuse of clozapine, an evidence-based practice, and overuse of non-clozapine antipsychotic polypharmacy (hereafter, antipsychotic polypharmacy), an unsupported practice to treat patients with schizophrenia may result in undesirable consequences. This study evaluated provider-level prevalence of clozapine and antipsychotic polypharmacy prescribing and associated factors. **METHODS:** Using 2010-2012 data from Pennsylvania's Medicaid we identified all providers who regularly prescribed antipsychotics to non-elderly adult patients with schizophrenia (defined as ≥10 patients/year). We characterized providers' patients and payers (managed care vs. fee-for-service) using Medicaid data, and providers' demographics using CMS's NPI file. We measured provider-level share of patients with clozapine use and antipsychotic polypharmacy use per year. Antipsychotic polypharmacy was defined as more than 90 days' concurrent use of ≥2 non-clozapine antipsychotics, with 32-day gap allowance. We used generalized estimating equations with a binomial distribution and a logit link to examine clozapine and antipsychotic polypharmacy practices and associated patient- and provider-level factors. **RESULTS:** The analytic cohort included 632-650 prescribers per year. Provider-level clozapine and antipsychotic polypharmacy practices were relatively stable over time. In 2012, provider-level mean shares of patients with clozapine and antipsychotic polypharmacy use were 6.9% (range: 0%-88.9%) and 7.0% (range: 0%-45.2%), respectively. A sizable proportion of providers prescribed antipsychotic polypharmacy but not clozapine (e.g., 15.5% in 2012). High volume prescribers were much more likely to prescribe clozapine (OR = 1.43, p<0.01) and antipsychotic polypharmacy (OR = 2.65, p<0.01)

than low volume prescribers. Primary care providers were substantially less likely than psychiatrists to prescribe clozapine (OR = 0.55, $p < 0.01$) but just as likely to antipsychotic polypharmacy. **CONCLUSIONS:** Antipsychotic polypharmacy is used as much as clozapine in the care of Medicaid beneficiaries with schizophrenia, but many prescribers only use the former. Clinical and policy initiatives are needed to improve providers' knowledge of clozapine and increase its use while decreasing use of antipsychotic polypharmacy.

PMH72

PREVALENCE AND CORRELATES OF NON-MEDICAL USE OF PRESCRIPTION STIMULANTS AMONG UNIVERSITY STUDENTS

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OBJECTIVES: To examine prevalence rates and co-relates of non-medical use of prescription stimulants for attention-deficit-hyperactivity disorder (ADHD) in a university student population with respect to student demographics and academic characteristics. **METHODS:** A cross-sectional research design, utilizing a convenience sampling and self-administered paper and pencil questionnaire technique, was adopted. The survey consisted of a screening tool to measure symptoms of Adult ADHD Self-Report Scale (ASRS-v1.1) in conjunction with items to measure the extent of self-reported prescription drug abuse among students. The use of prescription stimulants was profiled for students representing different schools and academic programs and reasons for the nonmedical use were documented. **RESULTS:** A sample of 638 completed surveys (response rate=98.15%) was obtained with data on unauthorized use of prescription drugs. About 8.62% (N=55) of the sample reported a current and past use of drugs such as Adderall, Ritalin, Dexedrine, Concerta, Cylert at least once. Of these, 76.9% used the drugs non-medically for enhancing academic performance and 23.1% used them for increasing alertness. The illicit drug usage was higher in the age group 18-23 years (87.2%) and was greater for males (64.1%). Overall, students from pharmacy school reported highest abuse (46.2%), followed by law school (20.5%), school of professional studies (12.8%) and business school (10.3%). Generally, undergraduate students reported greater use of prescription stimulants (69.2%) compared to graduate students (30.8%). A majority (66.7%) of the students were also attending professional degree programs. **CONCLUSIONS:** The current campus estimates are mostly in line with the national statistics (4.1% to 10.8%, according to the Center for Lawful Access and Abuse Deterrence, CLAAD, 2013). Misuse and abuse of prescription stimulants among students is a growing problem and largely remains unaddressed. Development of campus educational tools to prevent sharing of prescription drugs and guidelines to recognize early warning signs to curb abuse are necessary.

PMH73

CAN SOCIAL NETWORK ANALYSIS BE USED TO IDENTIFY DOCTOR SHOPPERS?

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OBJECTIVES: Doctor shopping is a principle method of obtaining controlled substances (CS) for misuse and is an indicator of escalating drug abuse and fatal overdose. Currently, numerical thresholds are used to identify doctor shoppers, but a lack of consensus on criteria has led to wide variations in estimated rates. The goal of this study was to investigate the feasibility of using social network analysis (SNA) to improve the specification and predictive validity of doctor shopping indicators. **METHODS:** i3 Innovus InVision™ data for the year 2009 was used to identify doctor shoppers using the 4 CS (opioid or benzodiazepine) prescriptions + 4 pharmacies criterion. A network of physicians was created using indirect ties defined by co-prescription to the same doctor shopping patient. A visualization of the clinician network was created to assess clustering, and bivariate analyses were conducted to assess the relationship between physician centrality, or number of ties to other prescribers through a common doctor shopping patient, in the co-prescribing network and average characteristics of a physician's patients. **RESULTS:** A total of 89,297 clinicians prescribed an opioid or benzodiazepine to at least one doctor shopper. The mean degree of centrality was 23.15 (SD 61.48 and ranged from 0-995). Physician degree centrality is positively correlated with patients' average number of pharmacies ($r = .28, p < .001$), number of prescriptions ($r = 0.21, p < .001$), number of MPEs ($r = 0.43, p < .001$), and number of repeated visits to the same prescriber ($r = 0.13, p < .001$). The network visualization map revealed a large network of 7,288 doctors tied by 45,181 co-prescribing relationships. **CONCLUSIONS:** The results of this study confirm the feasibility of using SNA to identify doctor shoppers. Further studies using two-mode SNA are warranted to improve the specification and predictive validity of doctor shopping indicators and to determine the patient, clinician, and point-of-service characteristics associated with doctor shopping behavior.

PMH74

PREVALENCE OF SELF-REPORTED ADULT ADHD SYMPTOMS AMONG UNIVERSITY STUDENTS: A MULTIDISCIPLINARY COMPARISON

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OBJECTIVES: To estimate prevalence of Adult ADHD (AADHD) symptoms among university-based students across multiple academic disciplines. **METHODS:** A cross-sectional research design, utilizing convenience sampling and self-administered paper and pencil questionnaire technique, was adopted. Adult students (>18 years) were recruited from a university campus in New York City area. AADHD Self-Report Scale- v1.1 (ASRS v1.1), a pre-validated screening instrument, was used to assess performance along inattention, hyperactivity/impulsivity and combined symptom sets of adult ADHD. A score of 17 or more on an ASRS v1.1 scale between 0 and 72 indicates the likelihood of ADHD, whereas a score of 24 or more indicates immense likelihood of ADHD. Individual component scores of ASRS were compared for students from six different schools and programs within the university. **RESULTS:** The final sample consisted of 638 students from six different schools represent-

ing multiple academic programs. Using ASRS-v1.1 symptom cut-off threshold, a prevalence rate of ADHD symptoms ranging from 21.2% to 66.2% (indicating likelihood and immense likelihood of ADHD respectively) was observed for the general student sample. Only 3.4% of the participants had been previously diagnosed with ADHD. The prevalence of self-reported ADHD symptoms was higher in the age group of 18-23 years (81.3%) and was greater in females (53.1%). A majority of students had the inattentive type of symptomatology (72.72%). With regard to different disciplines, prevalence rates ranged from 49% (pharmacy school) to 5.9% (school of education). More undergraduate students reported AADHD symptoms (70.9%) compared to graduate students (28.4%). Students in healthcare discipline reported greater ADHD symptomatology (54.6%) compared to students in non-healthcare fields. **CONCLUSIONS:** Symptoms of AADHD appear to be more prevalent in student populations than documented evidence would suggest. Among many that are affected, most are either unaware of the condition or undiagnosed. These findings have implications for students' overall health and academic performance.

PMH75

THE CONCENTRATION OF ANTIPSYCHOTIC PRESCRIBING: EVIDENCE FROM MEDICAID

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OBJECTIVES: Given considerable variability in treatment response and medication side effects across individual patients using antipsychotics, customizing treatment to the needs of each individual is key to improving patient outcomes. This study examined the degree to which psychiatrists were diversified vs. concentrated in their choice of antipsychotic medication and identified factors associated with their prescribing. **METHODS:** Using 2011 data from Pennsylvania's Medicaid we identified psychiatrists who regularly prescribed antipsychotics (defined as ≥ 10 nonelderly patients). Using prescriber ID we linked claims data, from which we obtained information on patient characteristics and psychiatrist prescribing behavior, to demographic information on psychiatrists from the AMA Masterfile, and to information on organizational affiliations from IMS Health's HCOS TM database. We used three measures of antipsychotic prescribing concentration: Herfindahl index (HHI), share of most preferred ingredient, and number of ingredients. We used multiple membership linear mixed models to evaluate the degree of concentration for antipsychotic prescribing. Predictors included patient-, physician-, and organization-level factors. **RESULTS:** The analytic cohort included 764 psychiatrists treating 65,256 patients. Psychiatrists prescribed several ingredients (mean: 9); however, prescribing behavior was relatively concentrated (mean HHI: 2,603; share of most preferred ingredient: 37.8%), with wide variation across psychiatrists (range HHI: 1,088-7,270; share of most preferred ingredient: 16.4%-84.7%; number of ingredients: 2-17). Having a higher share of SSI-eligible patients, patients with serious mental illnesses, non-Hispanic whites, and older patients was associated with less concentrated prescribing although effects were relatively small (all $p < .05$). Female psychiatrists had more concentrated prescribing than that of their male counterparts ($p < .10$). Psychiatrists affiliated with behavioral health organizations had more diversified antipsychotic prescribing. **CONCLUSIONS:** Antipsychotic prescribing behavior in a large state Medicaid program was relatively concentrated and varied substantially across psychiatrists. Some psychiatrists treating Medicaid enrollees with antipsychotics may be limited in their ability to tailor treatment to individual patient needs and preferences.

PMH76

IMPACT OF KENTUCKY HOUSE BILL 1 ON CONCURRENT PRESCRIBING OF OPIOID, ALPRAZOLAM, AND CARISOPRODOL

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OBJECTIVES: Kentucky House Bill 1 (HB1) was enacted in July 2012 to address prescription drug abuse and diversion. This legislation included stronger pain clinic regulations, mandatory prescriber registration with Kentucky's prescription drug monitoring program (PDMP) and mandatory use of PDMP data prior to issuing a new controlled substance prescription. The purpose of this study was to assess the impact of HB1 on the concurrent prescribing of three controlled substances: an opioid (hydrocodone or oxycodone), alprazolam, and carisoprodol (OAC). This combination has been identified as a signal for misuse and diversion. **METHODS:** De-identified PDMP data from July 2009 through June 2013 was analyzed to determine the number of patients who concurrently received prescriptions for OAC. Concurrent was defined as receiving prescriptions for each OAC component within 30 days. 12-month OAC totals were compared for each fiscal year (defined in KY as July 1 - June 30). Fiscal years were chosen for analysis based on the date of implementation of legislation (July 2012). Differences in mean number of patients receiving concurrent OAC prescriptions were analyzed using two-tailed t-tests for fiscal years pre and post legislation. **RESULTS:** The number of patients receiving concurrent OAC prescriptions for OAC during the study period were 22,423 (FY2010), 25,465 (FY2011), 22,795 (FY2012), and 15,983 (FY2013). The number of patients receiving concurrent OAC prescriptions was significantly lower ($P < 0.001$) in FY2013 relative to FY2012. **CONCLUSIONS:** Implementation of Kentucky House Bill 1 was associated with a 29.9% decrease in the concurrent prescribing of a combination of CS commonly associated with misuse and diversion. Further studies to differentiate the relative impact of pain clinic regulations from the impact of mandatory registration and use legislation are warranted to determine the effectiveness of these approaches in curbing the abuse and diversion of prescription drugs.

PMH77

PHYSICIAN CARE-PROVIDING BEHAVIOR IN TREATING ATTENTION-DEFICIT HYPERACTIVE CHILDREN AND ADOLESCENTS

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