

only on particular supportive types, particular outcomes or solely on caregivers. Therefore a general systematic review was conducted investigating effectiveness of different types of supportive strategies on at least well-being of the caregiver or the care-recipient. **METHODS:** A systematic literature search was conducted in Web of Science and PubMed. An adapted version of the Downs and Black (1998) checklist was used to assess methodological quality. **RESULTS:** Forty-six papers met inclusion criteria. Although 87% of the interventions were to some extent effective, methods and findings were rather inconsistent. Psychoeducational interventions generally lead to positive outcomes for caregivers, decrease behavioral problems and delay permanent institutionalization of care-recipients. Cognitive behavioral therapy decreases dysfunctional thoughts among caregivers, and occupational therapy decreases behavioral problems among patients. In general, those interventions tailored on individual level generate better outcomes. Comparative research on respite care was very rare. **CONCLUSIONS:** Despite methodological inconsistency, supporting caregivers appears to be an effective strategy often improving well-being of caregiver or care-recipient and resulting in additional benefits for society. However, there is a need for more research on the (cost)-effectiveness of respite care.

#### PMH10

##### PRESCRIPTION PATTERNS OF DRUGS FOR ATTENTION-DEFICIT/HYPERACTIVITY DISORDERS IN JAPANESE CHILDREN AND ADOLESCENTS

Inagaki A<sup>1</sup>, Endo Y<sup>2</sup>, Yoshizumi A<sup>3</sup>, Yamazumi J<sup>3</sup>, Hashimoto K<sup>3</sup>, Watanabe K<sup>4</sup>, Ito T<sup>4</sup>, Tsukada K<sup>4</sup>

<sup>1</sup>Aoyama Gakuin University, Tokyo, Japan, <sup>2</sup>Institute of Neuropsychiatry, Tokyo, Japan, <sup>3</sup>Hizen Psychiatric Center, Yoshinogari, Saga, Japan, <sup>4</sup>Kohndai Hospital, National Center of Global Health and Medicine, Ichikawa, Japan

**OBJECTIVES:** To examine the patterns of drug prescription for the treatment of attention-deficit/hyperactivity disorders in Japanese children and adolescents. **METHODS:** We conducted a cross-sectional survey on December 1, 2013, on patients aged 19 or less in two national mental hospitals. Patients who were prescribed at least one drug for the treatment of attention-deficit/hyperactivity disorders (anti-ADHD drug) were analyzed. Data were extracted on gender, age, and types and doses of psychotropic drugs. Data on the patients' diagnoses were not collected. **RESULTS:** The patients included 87 males and 26 females, with a mean age (standard deviation) of 12.4 (2.8) years. Of these 113 patients, 70 (61.9%) patients received the psychostimulant OROS methylphenidate (OROS-MPH) only, 26 (23.0%) received atomoxetine (ATMX), a selective noradrenalin reuptake inhibitor only, and 17 (15.0%) received the combination OROS-MPH/ATMX therapy. Antipsychotics were concurrently prescribed in 51 (45.1%) patients. Mood stabilizers were co-prescribed in 31 (27.4%) cases. Antidepressants were co-prescribed in 8 (7.1%) patients. Anxiolytics/hypnotics were concurrently prescribed in 23 (20.4%) patients. **CONCLUSIONS:** Nearly one-sixth of patients, aged 19 or less and treated with anti-ADHD drug therapy in Japanese mental hospitals, were prescribed OROS-MPH/ATMX combination therapy. In addition, almost half of these young patients on anti-ADHD drugs were co-prescribed antipsychotics.

#### PMH11

##### PREVALENCE OF SLEEPING PILLS CONSUMPTION AND ITS ASSOCIATION WITH DEPRESSIVE SYMPTOMS

Kodaira K, Okuyama JH, Silva M  
University of Sorocaba, Sorocaba, Brazil

**OBJECTIVES:** To assess the prevalence of sleeping pills consumption among Brazilian adults and its association with depressive symptoms. **METHODS:** This is an analysis of Brazilian National Health Survey performed in 2013. Primary outcome included self-reported sleeping pills use in last two weeks. We assessed five independent variables: number of days that sleeping pills were used; self-medication practice for sleeping pills; depressive symptoms (measured by the Patient Health Questionnaire PHQ-9 for depression); sex and age. To evaluate the association between the severity of depression symptoms and sleeping pills consumption we calculated prevalence ratio (PR) adjusted for sex and age through a Poisson regression with robust variance. Sensitivity analysis was performed by re-sampling technique (bootstrap). Complex sample design was balanced in all analysis in STATA software, version 11. **RESULTS:** 44,072 individuals were included. 62.1% were women and had a mean age of 45.6 ± 29.7. Taking sleeping pills in the last two weeks was reported by 8.5% (95% CI: 8.0-9.0%), of which 9.7% (95% CI: 8.2-11.3%) took without medical advice. Mean duration of treatment in this period was 9.9 ± 8.3 days. Depressive symptoms were reported as: minimal by 13.9%, minor by 5.1%, moderately severe by 2.2%, and severe major symptoms by 1.1%. Compared to people without depressive symptoms, the PR of sleeping pill use was: 3.6 (95% CI: 3.1-4.1) for minimal depressive symptoms, 5.2 (95% CI: 4.4-6.1) for minor depressive symptoms; 6.9 (95% CI: 5.8-8.2) for moderately severe depressive symptoms; and 9.2 (95% CI: 7.6-11.2) for severe major depressive symptoms ( $p < 0.001$  for all calculations, without changes in the sensitivity analysis). **CONCLUSIONS:** One out of ten Brazilians took pills to induce sleep in previous two weeks, and this consumption is strongly associated with the prevalence of depressive symptoms. Individuals that use sleep medicines should search for psychiatrist aid to evaluate possible co-existence of depression.

#### PMH12

##### MENTAL HEALTH DISORDER PREVALENCE TRENDS IN GERMANY: A LONGITUDINAL ANALYSIS

Schlender M<sup>1</sup>, Schwarz O<sup>2</sup>, Trott E<sup>3</sup>, Banaschewski T<sup>4</sup>

<sup>1</sup>University of Heidelberg, Wiesbaden, Germany, <sup>2</sup>University of Heilbronn, Wiesbaden, Germany, <sup>3</sup>University of Würzburg, Wiesbaden, Germany, <sup>4</sup>Central Institute of Mental Health, Mannheim, Germany

**OBJECTIVES:** The burden of mental health disorders (MHDs) is believed to be substantial and increasing, but robust data on real-life diagnosis trends are rare. The objective of the present analysis was to explore changes in the administrative 12-months prevalence rates of MHDs from 2003 to 2009 in Nordbaden, Germany. **METHODS:** The complete claims database of the organization of registered physicians (Kassenaerztliche

Vereinigung) in Nordbaden/Germany was available for analysis, covering the total regional population enrolled in Statutory Health Insurance (>2.2 million lives for years 2003 to 2009). Linear trend analyses were performed using regression analysis with the growth index of the prevalence rates of MHDs as dependent variable, and a coefficient of determination  $R^2 > 0.57$  at a significance level  $p < 0.05$  indicating a meaningful trend observation. **RESULTS:** Overall, MHD diagnoses remained stable at rates between 31% and 34% during the observation period. MHDs were diagnosed more frequently in females (rates 37%-43%) than in males, whereas a significant increase was observed in males only (from 23.5% in 2003 to 28% in 2009). Most frequently diagnosed mental health problems in 2009 were depressive episodes, with an overall administrative 12-months prevalence rate of 8.3%; unspecified somatoform disorders, 4.8%; harmful use of tobacco, 3.4%; neurasthenia, 2.3%; and adjustment disorders, 2.2%. Age and gender specific trends will be reported in detail. For example, from 2003 to 2009, the administrative prevalence of attention-deficit/hyperactivity disorder (ADHD) increased by 79% (from 0.53% in 2003 to 0.95% overall; 6-12 years, 8.0%; 13-17 years, 4.2%; adults from 0.04% in 2003 to 0.17% in 2009). Substantial prevalence increases were also found for dementia (significant for males only) and for disorders due to substance abuse (both males and females). **CONCLUSIONS:** The overall prevalence of MHDs did not increase during the observation period. Growing numbers for some disorders were compensated for by decreases of others.

#### MENTAL HEALTH – Cost Studies

#### PMH13

##### BUDGET IMPACT ANALYSIS OF INTRODUCING LISDEXAMFETAMINE DIMESYLATE FOR THE TREATMENT OF BINGE EATING DISORDER IN THE UNITED STATES

Ágh T<sup>1</sup>, Pawaskar M<sup>2</sup>, Nagy B<sup>1</sup>, Szilberhorn L<sup>1</sup>, Vokó Z<sup>1</sup>

<sup>1</sup>Syreon Research Institute, Budapest, Hungary, <sup>2</sup>Shire, Wayne, PA, USA

**OBJECTIVES:** Lisdexamfetamine dimesylate (LDX) 50 and 70 mg demonstrated efficacy in terms of reduced binge eating days per week in adults with moderate to severe binge eating disorder (BED) in 2 randomized control trials (RCTs). This analysis aimed to determine the budgetary impact of introducing LDX for the treatment of BED in the United States (US). **METHODS:** A 1-year budget impact analysis from a US health care payer's perspective was performed. The patient population in the budget impact analysis was treated and diagnosed BED patients aged 18 years and older in the US. It was estimated that 17.5% of the budget impact patient population was treated with LDX in the first year of use. The base case analysis assumed a 12-week course of treatment, based upon RCTs' treatment duration. The model considered health care utilization costs, drug costs and costs of adverse events. Inputs in the model were obtained from literature, trial data and an epidemiology survey. **RESULTS:** Based on the inputs and assumptions, the total direct budgetary cost of treating BED within the adult US population, without LDX is estimated to be \$241,699,596 over a 1-year time frame. If LDX were to treat 17.5% of the market, then the expected total budget would increase to around \$242,768,676 which would be primarily due to the drug cost; however, there would be health care utilization costs savings of around \$2,257,096. Introducing LDX would imply incremental average per member per year cost by \$0.004. **CONCLUSIONS:** The budget impact of treating BED with LDX is modest; additional scientific evidence on the long-term economic burden of BED and the long-term efficacy of LDX therapy would help better understand the budgetary effect of LDX in BED.

#### PMH14

##### LURASIDONE IN ADULTS WITH SCHIZOPHRENIA IN THE UK: A COST CONSEQUENCE ANALYSIS CONSIDERING COST IMPLICATIONS OF IMPROVED EFFICACY AND SAFETY

Rajagopalan K<sup>1</sup>, Trueman D<sup>2</sup>, Crowe L<sup>2</sup>, Patel P<sup>1</sup>, Loebel A<sup>3</sup>

<sup>1</sup>Sunovion Pharmaceuticals, Inc, Marlborough, MA, USA, <sup>2</sup>Abacus International, Bicester, UK, <sup>3</sup>Sunovion Pharmaceuticals, Inc, Fort Lee, NJ, USA

**OBJECTIVES:** Lurasidone is an atypical antipsychotic with a favourable metabolic adverse event profile, indicated for treatment of adults with schizophrenia. The objective of this study was to perform an analysis of the impact of lurasidone on the National Health Service budget in the UK. **METHODS:** A 3-year budget impact model was developed based on epidemiological estimates of total number of adults beginning antipsychotic therapy for schizophrenia. Costs considered included drug acquisition, weight gain, diabetes, and hospitalisations associated with relapse. Lurasidone 3-year uptake was based on projected displacement of the following atypical antipsychotics: olanzapine, risperidone, quetiapine and aripiprazole. Efficacy data were based on indirect comparisons. Univariate sensitivity analysis was conducted to assess the impact of differential rates of displacement. **RESULTS:** The current annual cost of schizophrenia in the population beginning antipsychotic therapy was approximately £17m. In year 1, treatment costs represented 7% of total costs; hospitalisations, weight gain and diabetes represented 90%, 3% and 1%, respectively. Base case uptake of lurasidone was assumed to be 5.5% annually. Assuming that lurasidone displaced only aripiprazole, lurasidone was associated with a net cumulative saving of £1.9m by year 3. Assuming lurasidone took market share equally from all considered atypicals, the net cumulative saving was £739k by year 3. In this equal displacement scenario, lurasidone uptake ranging from 2.5% to 11% resulted in estimated cumulative 3-year savings of £369k to £1.5m, respectively. **CONCLUSIONS:** Lurasidone was associated with cost savings in all scenarios. Estimates of annual budget impact ranged from cost savings of £369k to £1.9m. Cost savings were driven predominantly by reduced rates of hospitalisations associated with relapse, but also reduced costs of weight gain and diabetes.

#### PMH15

##### COST-UTILITY AND BUDGET IMPACT ANALYSES COMPARING LURASIDONE WITH ARIPIPRAZOLE IN ADULTS WITH SCHIZOPHRENIA IN SCOTLAND

Rajagopalan K<sup>1</sup>, Trueman D<sup>2</sup>, Crowe L<sup>2</sup>, Patel P<sup>1</sup>, Loebel A<sup>3</sup>

<sup>1</sup>Sunovion Pharmaceuticals, Inc, Marlborough, MA, USA, <sup>2</sup>Abacus International, Bicester, UK, <sup>3</sup>Sunovion Pharmaceuticals, Inc, Fort Lee, NJ, USA