sourcing to children and adults in a primary care patient population. METHODS: A retrospective, cross-sectional pharmacoepidemiological study was conducted on data from the Antidepressant Polymedication study (APM), South Africa for patients on film for methylphenidate and/or atomoxetine (ATC Code N06BA) were analysed. Patients under 18 years were labeled as children, and patients over 18 years as adults.

RESULTS: A total of 22,387 patients (70.05% children and 29.95% adults) received one or more prescriptions for methylphenidate for atomoxetine during 2010. A total of 60,370 prescriptions were dispensed (75.54% to children and 24.46% to adults). Most adult patients (43.11%) were between 19 and 29 years of age. Nearly three-quarters of children (71.84%) were males, compared to only 55.32% of adults.

Children received on average 2.93 prescriptions during the year and adults only 2.20. Methylphenidate accounted for 90.00% of prescriptions to children and 94.60% to adults. The average sales value for a methylphenidate prescription was $366.13 for children and $408.42 for adults, compared to the average cost for an atomoxetine prescription of $82.31 for children and $653.94 for adults. There is no generic atomoxetine on the market and therefore no cost difference with the atomoxetine.

The proportion of patients prescribed methylphenidate versus atomoxetine showed peaks and troughs corresponding with the June/July and December/January holiday periods. CONCLUSIONS: The duration of treatment and complexity of ADHD treatment is growing, extending into adulthood. Comprehensive cost-intensive approaches to ADHD are needed that include quality-of-life and productivity factors.

PMH10
ANTIDEPRESSANT PRESCRIPTION PATTERNS AMONG PATIENTS WITH MAJOR DEPRESSION BASED ON CLAIMS DATABASE IN JAPAN
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OBJECTIVES: Clinical guidelines recommend monotherapy with antidepressants for major depression. This study examined prescription patterns and trends as well as antidepressant polypharmacy among patients with major depression based on the claims database of health insurance companies in Japan between 2008 and 2011 in Japan. METHODS: Retrospective cohort study of 750,000 followed up for four years was used to identify patients (age ≥ 18) with newly diagnosed non-psychotic major depression. The prescription patterns were examined for antidepressants (first and second generation), BZD anxiolytics and hypnotics, sulpiride, and antipsychotics. The data were analyzed using a Poisson regression model in which compliance and complexity of ADHD treatment is growing, extending into adulthood. Comprehensive cost-intensive approaches to ADHD are needed that include quality-of-life and productivity factors.

RESULTS: A total of 10,967 patients (male: 5,362, mean age: 37.11 ± 6.35 years) with major depression were identified. The proportion of patients prescribed at least one medication was 84% (month 0), 41% (month 3), 35% (month 6) and 23% (month 12). The proportion of patients prescribed antidepressant was 56% (month 0), 26% (month 3), 22% (month 6) and 14% (month 12) of the cohort. BZD hypnotics were prescribed to 25% of patients at month 0. Sulpiride was prescribed to 25%. The proportion of patients with monotherapy of antidepressant was 12% (month 0). Various patterns of polypharmacy were observed. The most common combination of antidepressant and BZD anxiolytics (20% at month 0). Antidepressant with both BZD anxiolytics and BDZ hypnotics (8% at month 0) as well as the combination of sulpiride and BZD anxiolytics (6% at month 0) were also observed. CONCLUSIONS: The majority of patterns and trends of antidepressant prescription remain constant over time. Various patterns of prescriptions and polypharmacy were observed over time.

PMH10
PATIENT PERSISTENCE WITH BUPRENORHINE/NALOXONE FILM AND TABLET FORMULATIONS IN THE TREATMENT OF OPIOID DEPENDENCE IN THE UNITED STATES: RESULTS FROM A LARGE PRIVATELY INSURED RETROSPECTIVE DATABASE
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OBJECTIVES: The buprenorphine/naloxone combination has been available in a variety of delivery formats, including film and tablet. The time to treatment discontinuation was longer in the film group, with a median time to discontinuation of 2.5 months (month 0) as well as the combination of sulpiride and BZD anxiolytics (6% at month 0) were also observed. CONCLUSIONS: The majority of patterns and trends of antidepressant prescription remain constant over time. Various patterns of prescriptions and polypharmacy were observed over time.

RESULTS: A total of 10,967 patients (male: 5,362, mean age: 37.11 ± 6.35 years) with major depression were identified. The proportion of patients prescribed at least one medication was 84% (month 0), 41% (month 3), 35% (month 6) and 23% (month 12). The proportion of patients prescribed antidepressant was 56% (month 0), 26% (month 3), 22% (month 6) and 14% (month 12) of the cohort. BZD hypnotics were prescribed to 25% of patients at month 0. Sulpiride was prescribed to 25%. The proportion of patients with monotherapy of antidepressant was 12% (month 0). Various patterns of polypharmacy were observed. The most common combination of antidepressant and BZD anxiolytics (20% at month 0). Antidepressant with both BZD anxiolytics and BDZ hypnotics (8% at month 0) as well as the combination of sulpiride and BZD anxiolytics (6% at month 0) were also observed. CONCLUSIONS: The majority of patterns and trends of antidepressant prescription remain constant over time. Various patterns of prescriptions and polypharmacy were observed over time.

PMH10
ARE DISEASE RELATED COSTS OF CARE FOR MAJOR DEPRESSION IN GERMANY OVERESTIMATED? – USING CLAIMS DATA TO ASSESS THE INFLUENCE OF DISEASE SEVERITY AND COMORBIDITY
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OBJECTIVES: Due to varying survey methods and samples, annual direct cost estimates for the care of major depression (MD) in Germany vary between 1264 and 2577€ per patient in bottom-up cost analyses. To obtain more precise estimates for costs of care we drew a sample from claims data of a statutory health insurance covering approx. 11% of the German population. By accounting for levels of disease severity and comorbidities, we (a) provide a stratified cost analysis for MD in Germany and (b) explore potential bias caused by small samples or population selection bias.

METHODS: We selected a patient cohort aged 18 years or older and treated with depression in the previous 6 months with (a) at least two secured diagnoses of depression in 2010 and (b) the first depression-related service utilization between 01.01.2010 and 15.02.2010. Depression-related costs for outpatient-care, inpatient-care, and antidepressants were analyzed for the remaining year 2010 in total and by provider. Patients were stratified into three disease severity (ds) levels: minor/ unspecified/atypical (ds1), minor (ds2), and severe (ds3) MD. Furthermore 12 (co)mobidity groups were analyzed. RESULTS: The sample comprised 18,139 patients with a mean of 88.78 in annual direct costs for care in 2011. Costs for disease severity and mental comorbidity (mc) were for (ds1): n = 11,978 (66%), 623€ (without/with mc 596€/737€); for (ds2): n = 4,420 (24%), 1234€ (without/with mc 1036€/1610€); for (ds3): n = 1,741 (10%), 1838€ (without/with mc 1896€/2483€). While mental comorbidities significantly explained higher direct costs for depression for every provider, somatic comorbidities did not. CONCLUSIONS: Our sample represented a large proportion of patients with low disease severity (ds1) and (b) large cost differences explained by disease severity and mental comorbidities. Comparable studies reporting higher mean costs for depression may possibly underestimate patients with low disease severity in their sample.

PMH11
LONGITUDINAL ANALYSIS OF PATIENT LEVEL HEALTH CARE COSTS IN PATIENTS WITH MAJOR DEPRESSIVE DISORDER TREATED WITH DULOXETINE
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OBJECTIVES: To develop and apply a longitudinal model adjusting for pre-treatment covariates to examine trajectory patterns of health care costs in patients with major depressive disorder (MDD) treated with duloxetine. METHODS: Retrospective health care cost data from Thomson Reuters MarketScan® Database for 10,987 MDD patients, aged 18-64 initiating duloxetine in 2007 at low, standard, or high doses (<60, 60, or >60 mg/day) were used to build a longitudinal model for the
examination of trajectory patterns of patient-level health care costs. The model was adjusted for baseline demographics, Charlson comorbidity index (CCI), body mass index (BMI), and prior medication index (PMI). Rates of change (slopes) were estimated from the fitted model and differences in the cost trajectory patterns among dosing cohorts were tested using F-test. Bootstrap sampling was used to provide a sensitivity analysis. RESULTS: A repeated measures linear mixed model with dose, month as fixed effects, patient, patient*dose as a random effects, adjusting for demographics, CCI, BMI, and PMI, was developed. Main effects and covariates were all significant (all p<0.05). The model revealed that total health care costs increased sharply in the months leading up to, and decreased in the months following, initiation of duloxetine treatment for each dosing cohort and that the overall cohort (all p<0.05). Compared to patients given placebo therapy, patients who received high-dose duloxetine had higher health care expenses both prior to and following initiation of duloxetine therapy (p<0.05). Bootstrapping confirmed the above test results. CONCLUSIONS: Longitudinal models provide great opportunities to assess changes in cost trajectory patterns around the time of changes in medical treatment compared to the current standard mean methods. In this analysis, health care costs increased prior to the initiation of duloxetine therapy, perhaps signaling a clinical deterioration that led to that change in treatment strategy. Health care costs then decreased following initiation of duloxetine treatment.

PMH14
REAL-LIFE COST-ANALYSES OF PATIENTS WITH GENERALIZED ANXIETY DISORDER IN DENMARK
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OBJECTIVES: To evaluate the health and productivity costs in patients with generalized anxiety disorder (GAD) before and after the initiation of a SSRI (selective serotonin reuptake inhibitor), a SNRI (selective norepinephrine reuptake inhibitor), an SSRI/diazapine or pregabalin. CONCLUSIONS: Patients meeting DSM-IV criteria (treatment courses included: 14,095 SSRI; 5,035 SNRI; 8,580 benzodiazepines; 1,628 pregabalin). Twelve months health care costs were only significantly reduced in the pregabalin group (€808-€1,961 vs placebo). Twelve months health care costs increased sharply in the months leading up to, and decreased in the months following, initiation of duloxetine treatment for each dosing cohort and that the overall cohort (all p<0.05). Compared to patients given placebo therapy, patients who received high-dose duloxetine had higher health care expenses both prior to and following initiation of duloxetine therapy (p<0.05). Bootstrapping confirmed the above test results. CONCLUSIONS: Longitudinal models provide great opportunities to assess changes in cost trajectory patterns around the time of changes in medical treatment compared to the current standard mean methods. In this analysis, health care costs increased prior to the initiation of duloxetine therapy, perhaps signaling a clinical deterioration that led to that change in treatment strategy. Health care costs then decreased following initiation of duloxetine treatment.

PMH15
AN ECONOMIC SYSTEMATIC REVIEW ON BIPOLAR DISORDER IN CHILDREN AND ADOLESCENTS: COST-EFFECTIVENESS OF TREATMENTS, COSTS OF CARE AND QUALITY OF LIFE
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OBJECTIVES: A 2005 systematic review identified no cost-effectiveness studies in paediatric bipolar disorder (PBD). Following a recent surge in clinical research on the use of atypical antipsychotics in this area, an update of the review is necessary to inform economic models. The current systematic review objective was to identify all literature published since 2005 on economic aspects of PBD. METHODS: EMBASE, MEDLINE, PsychINFO, CINAHL, EconLIT, and NHSEED were systematically searched from 2005 to January 2012. Articles were included if they reported an economic evaluation (cost-minimisation, cost-effectiveness, cost-utility or cost-benefit study), details of costs of care, resource use and utilities. RESULTS: Of 5,388 search results, 3,275 citations remained potential eligible for inclusion. In total, 7 studies were identified that reported HRQoL data for bipolar patients >18yrs. No articles were found that reported on economic evaluations, costs of care, resource use or utilities for PBD. Two congress abstracts reported PQLS-Q values from an antipsychotic RCT and 1 reported CHQ-FSS0 from a quetiapine RCT. Both treatments were found to improve HRQoL, but the difference from placebo did not reach significance for aripiprazole over the 4 week trial. Other studies found that PBD was associated with significantly lower HRQoL than other common childhood conditions. HRQoL might be more affected by depressive or manic mania than PBD itself. CONCLUSIONS: Despite the increase in the number of clinical trials on treatments for paediatric bipolar disorder, there are currently no published cost-effectiveness studies, cost/resource use data or utilities. These data will be required to inform reliable cost-effectiveness models of treatments in this field.

PMH16
ANALYSIS OF THE ECONOMIC BURDEN AND COST STRUCTURE OF SCHIZOPHRENIA IN GERMANY USING OBSERVATIONAL SICKNESS FUND DATA
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OBJECTIVES: In Germany, about 500,000 people suffer from Schizophrenia. Due to its chronic relapsing course that involves fundamental functional and social impairments, schizophrenia imposes a high burden on society. However, studies to determine the economic consequences of the disease have largely been carried out in clinical settings based on a relatively small number of cases. Therefore we aim to assess the medical and non-medical consequences of schizophrenia as well as the cost structure across treatment settings and population characteristics using administrative data. METHODS: Costs attributable to Schizophrenia were estimated using a case-control design, where 26,294 patients drawn from a sickness fund administrative database were matched to 9,319 patients with a confirmed diagnosis of schizophrenia (ICD-10: F20). To obtain balance between groups, treatment of observed and unobserved treatment variables (age, sex, prior number of drug prescriptions, Elxahauer comorbidities) and to reduce the conditional bias, a ge-netic matching algorithm was employed. Eventually, costs and other health care resource utilization parameters for cases and controls were recorded during 2008. RESULTS: In 2008 annual cost attributable to Schizophrenia amounts to €1061 per patient from the payer’s perspective, and €1997 from the societal perspective. Lost productivity (46.6%), inpatient treatment (29.0%) and nursing care (14.3%) are the major cost drivers of the disease. The burden of disease of Schizophrenia in Germany is estimated to be approximately €5200 million per year from the sickness fund perspective and €9804 million from the societal perspective. CONCLUSIONS: While our calculations still underestimate the true burden of disease due to restricting quality of life to production forgone and due to ignoring the impact on family members, considerable direct and indirect costs of schizophrenia highlight the need for further research in order to improve care practices and to find innovative treatment solutions.

PMH17
ECONOMIC BURDEN IN SCHIZOPHRENIA: A LITERATURE REVIEW
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OBJECTIVES: Schizophrenia places a heavy burden on individuals and their caregivers, as well as potentially placing a large demand on the health care system and its resources. The objective was to understand the cost burden imposed by schizophrenia, and to identify the key drivers of costs. METHODS: We conducted a literature review capturing reviews and recent individual studies on costs of the disease in Europe and US, using Embase and Medline databases. RESULTS: Thirty-six references were included, covering 8 countries (UK, France, Germany, Norway, Canada, US, India and Thailand). Costs described were mainly those related to care provided in hospital (73%) and specialised community care (27%). Costs were estimated using a case-control design, where 26,294 patients drawn from a sickness fund administrative database were matched to 9,319 patients with a confirmed diagnosis of schizophrenia (ICD-10: F20). To obtain balance between groups, treatment of observed and unobserved treatment variables (age, sex, prior number of drug prescriptions, Elxahauer comorbidities) and to reduce the conditional bias, a genetic matching algorithm was employed. Eventually, costs and other health care resource utilization parameters for cases and controls were recorded during 2008. RESULTS: In 2008 annual cost attributable to Schizophrenia amounts to €1061 per patient from the payer’s perspective, and €1997 from the societal perspective. Lost productivity (46.6%), inpatient treatment (29.0%) and nursing care (14.3%) are the major cost drivers of the disease. The burden of disease of Schizophrenia in Germany is estimated to be approximately €5200 million per year from the sickness fund perspective and €9804 million from the societal perspective. CONCLUSIONS: While our calculations still underestimate the true burden of disease due to restricting quality of life to production forgone and due to ignoring the impact on family members, considerable direct and indirect costs of schizophrenia highlight the need for further research in order to improve care practices and to find innovative treatment solutions.

PMH18
TREATMENT PATTERNS AND COSTS IN PATIENTS WITH SCHIZOPHRENIA IN GERMANY
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OBJECTIVES: Schizophrenia is a chronically disabling and severely mental disorder with considerable economic importance. Detailed estimates of treatment patterns and costs of outpatient and inpatient treatment of patients with schizophrenia are an important input factor for health economic cost-effectiveness analyses. Up to date there are several publications which assess the treatment patterns and costs of schizophrenia in Germany. However, most of the information is limited as an input for cost-effectiveness models due to the fact that differentiated micro information about the frequency of contacts in different treatment areas and costs of a single contact are missing. Therefore, we examine the treatment patterns and micro costs of treatment of schizophrenia re-