

PMH20

THE SOCIETAL COSTS OF SCHIZOPHRENIA IN SWITZERLAND

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OBJECTIVES: The objectives of this study are to estimate the prevalence of schizophrenia in Switzerland and to assess its burden on patients, caregivers and society as a whole. **METHODS:** A hospital registry was combined with a physician survey and health insurance claims data to capture all patients living in the northern part of the canton of Zurich. Total costs included direct medical and non-medical costs and lost production. All costs were calculated for the year 2012 from a societal perspective using a prevalence-based bottom-up approach. Intangible costs were expressed as quality adjusted life years (QALY) lost and were calculated from Swiss life tables, standardized mortality ratios and utility weights from the literature. Uncertainty and its sources were addressed in univariate and probabilistic sensitivity analysis. **RESULTS:** The point prevalence of schizophrenia in 2012 was estimated at 0.39% of the Swiss population. The average annual costs of schizophrenia amounted to EUR 39,408 per patient and consisted of direct medical costs of EUR 9,507 (24%), the costs of care by relatives and in residential homes of EUR 4,793 (12%) and lost production of EUR 25,108 (64%). Inpatient hospital care accounted for EUR 6,242 per year or 66% of direct medical costs. The estimated reduction in life expectancy of 10.46 years and the utility decrement of 22.05 percentage points lead to intangible costs of 19.02 QALY per incident chronic case. **CONCLUSIONS:** The results of this study show the high burden of schizophrenia on patients, caregivers and society as a whole. The high costs of inpatient hospital care demonstrate the benefits of an effective prevention of relapse associated with hospitalization. Programs for the reintegration of schizophrenic patients into the labor market have a high potential to reduce the costs of schizophrenia considering the high burden of lost production and the early onset of the disease.

PMH21

A MODEL TO ESTIMATE THE HEALTH SYSTEM BURDEN OF PRESCRIPTION OPIOID ABUSE IN EUROPE

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OBJECTIVES: Prescription opioid ("RxO") abuse has not been regarded as a major problem in Europe so far, but a lack of reliable data hinders the assessment of this problem. This study aimed to derive estimates of the prevalence and excess costs of RxO abuse in the five largest European countries (France, Germany, Italy, Spain, and UK; "EU5"). **METHODS:** Data from the European Monitoring Centre for Drugs and Drug Addiction and the UN Office on Drugs and Crime, on the prevalence of problem opioid abuse and the share of opioid abuse patients who report using non-heroin opioids, were used to estimate the prevalence of RxO abuse in the EU5. The costs of RxO abuse were calculated by applying published estimates of the excess health care costs of RxO abuse to country-specific estimates on the costs of chronic pain. Sensitivity analyses varied assumptions surrounding the prevalence of opioid abuse patients in the general population and the estimates of the excess costs of RxO abuse in the EU5. **RESULTS:** The prevalence of RxO abuse, in the general population, varied between the EU5 countries, ranging from 0.7 per 10,000 to 13.7 per 10,000. In the base case scenario, the total annual health system costs of RxO abuse across all EU5 countries were estimated to be €323 million; results of sensitivity analyses ranged from €98 million to €730 million. These cost estimates included health system costs only; indirect costs were not included. **CONCLUSIONS:** RxO abuse imposes a burden on EU5 health systems. Future research should examine trends in the prevalence and total economic burden of RxO abuse in Europe over time and assess the potential benefits of abuse-deterrent formulations, which published research suggests have been associated with a significant relative reduction in rates of diagnosed opioid abuse.

PMH22

PRODUCTIVITY LOSS AND RESOURCE UTILIZATION IN INDIVIDUALS PROVIDING CARE FOR ADULTS WITH SCHIZOPHRENIA IN THE 5EU

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OBJECTIVES: This study aimed to understand the impact of providing care for adults with schizophrenia on productivity, daily activities and resource utilization in the 5EU. **METHODS:** Data from the 2010-2011 and 2013 5EU (France, Germany Italy, Spain, UK) National Health and Wellness Survey, an online questionnaire of a nationwide sample of adults (18+ years) was analyzed. Schizophrenia caregivers (n=398) were matched to non-caregivers (n=158,989) and other caregivers (n=14,341) on baseline characteristics (sociodemographics, BMI, comorbid status) via propensity scores (1: 2). Outcome measures included health care utilization (type/number of resources used within the past 6 months) and Work Productivity and Activity Impairment questionnaire-based scores. Chi-square tests and ANOVAs were used to determine significant differences between schizophrenia caregivers vs. non-caregivers and other caregivers (e.g., cancer, Alzheimer's). **RESULTS:** The average age of schizophrenia caregivers was 45.3 (SD=15.8 years), 59.6% were female, and 52.5% were currently employed. After matching, schizophrenia caregivers reported greater activity impairment (38.4% vs. 26.1%), more health care provider visits (8.0 vs. 5.7), emergency room visits (0.9 vs. 0.2) and hospitalizations (0.8 vs. 0.1) than non-caregivers, all p<0.001. Amongst employed respondents, schizophrenia caregivers reported greater absenteeism (12.4% vs. 5.6%), presenteeism (29.9% vs. 17.5%), and overall work impairment (35.0% vs. 20.7%) than non-caregivers, all p<0.001. Comparing schizophrenia caregivers and other caregivers, schizophrenia caregivers reported more activity impairment (38.4% vs. 32.3%) and health care provider visits (8.0 vs.

6.6), both p<0.05. A greater proportion of schizophrenia caregivers reported at least one emergency room visit (26.1% vs. 20.2%) and hospitalization (20.4% vs. 14.3%) than other caregivers, both p<0.05. No significant difference was found on work-related impairment, probably due to the small sample of employed respondents. **CONCLUSIONS:** Schizophrenia caregivers reported greater activity impairment and more resource use than non-caregivers and caregivers of adults with other conditions. Better family and social support systems may help reduce the burden for schizophrenia caregivers.

PMH23

MEDICATION USAGE PATTERN, HEALTH RESOURCE UTILIZATION AND ECONOMIC BURDEN FOR PATIENTS WITH MDD IN BEIJING, CHINA

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OBJECTIVES: To investigate medication usage patterns, health care resource utilization and direct medical costs of patients with Major Depressive Disorder (MDD) in Beijing, China. **METHODS:** Data were randomly extracted from Beijing Urban Employee Basic Medical Insurance Database. Patients who were aged ≥18 years, with at least 1 primary diagnosis of MDD and 12-month continuous enrollment after their first observed MDD diagnosis between 2012 and 2013 were identified. Those with a diagnosis of schizophrenia, bipolar disorder or cancer within the study period were excluded. Descriptive statistics were used to describe patient profiles, medication usage, health care resource utilization and costs. **RESULTS:** A total of 8484 patients were included with mean (±SD) age of 57.15 (±15.34) years, 63.02% female and 94.47% having co-morbidities. 71.35% of patients were treated with antidepressant medications, including 60.53% of patients with SSRIs, followed by NaSSA (8.96%) and SNRIs (8.26%). Concomitant medications were prescribed for 76.78% of patients. Only 0.42% of patients experienced ≥1 MDD-related hospitalizations during the 1-year follow up and the average annual number of hospitalization was 1.22 (±0.64) for those hospitalized patients. The length of stay was 33.38 (±30.6) days per hospitalization and 36.61 (±40.04) days per patient-year. All patients had ≥1 MDD-related outpatient visits. The mean annual number of outpatient visits was 3.06 (±2.99). The mean annual direct medical cost for all MDD patients was 1694.05 (±2513.71) RMB with 48.54% for antidepressant medications, and that for hospitalized patients was 21290.97 (±16121.61) RMB with 15.03% for antidepressant medications and 66.45% for non-drug medical costs. **CONCLUSIONS:** In Beijing China, most MDD patients also had comorbid conditions and were mainly treated in the outpatient setting. SSRIs were the most commonly used antidepressants. The economic burden of MDD was considerable.

PMH24

ATOMOXETINE FOR THE TREATMENT OF NEWLY DIAGNOSED ADULTS WITH ADHD - A COST EFFECTIVENESS ANALYSIS IN SPAIN

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OBJECTIVES: Atomoxetine is the first medication to receive marketing authorization in Spain for the treatment of newly diagnosed adults with Attention-Deficit/Hyperactivity Disorder (ADHD). The aim of this analysis was to assess if treatment with atomoxetine in adults with ADHD was cost-effective vs. placebo from the Spanish Healthcare System perspective. **METHODS:** A Markov state transition model was developed for a theoretical cohort of newly diagnosed adult patients with moderate-severe ADHD. Key input data (response and discontinuation) were derived from the atomoxetine trial program. Patients enter the model at the age of 18 and receive atomoxetine (initiated at 40mg for a week and then titrated to 80mg or 100mg) or placebo (in the absence of another authorized medication for the treatment of newly diagnosed adults with ADHD). Treatment success has been defined as response to treatment, showing improvements in both symptoms and functioning as measured by the CAARS and CGI-S scales, respectively. Treatment, non-specific health state utilities were populated with estimates from a vignette study in adults conducted in the UK. Drug and direct medical costs were obtained from local databases. In accordance with other published ADHD models, a 1-year time horizon was used. To check the model for robustness, probabilistic and deterministic sensitivity analyses were performed. **RESULTS:** Atomoxetine was found to be cost-effective with an ICER of €24,248/QALY despite patients in placebo arm only accumulating cost of physician visits. In addition, a QALY gain of 0.023 was projected, due to greater proportion of patients responding to treatment in the atomoxetine arm. Results from a probabilistic sensitivity analysis indicated that atomoxetine has a 57% probability of being more cost-effective than placebo at a willingness to pay threshold of €30,000/QALY in the Spanish setting. **CONCLUSIONS:** Atomoxetine is a cost-effective option versus no active medical treatment for newly diagnosed adults with ADHD in Spain.

PMH25

ARIPRAZOLE ONCE-MONTHLY IS A COST-EFFECTIVE THERAPEUTIC OPTION IN THE MAINTENANCE TREATMENT OF SCHIZOPHRENIA: RESULTS FROM A MARKOV MODEL

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OBJECTIVES: Schizophrenia is a heterogeneous chronic disease with enormous economic consequences for the society. This study aimed at building a conceptual framework to evaluate the cost-effectiveness of Aripiprazole Once-Monthly (AOM) versus other atypical long-acting injectable (LAI) antipsychotics: Risperidone LAI (RLAI), Paliperidone Palmitate (PP) and Olanzapine Pamoate (OP) in the mainte-