a broader understanding of the influence of epidemics on health care systems. It is possible to investigate feedback of health service structure changes and reimbursement decisions on prevalence and effects of infectious diseases.

IS IT POSSIBLE TO OBTAIN WILLINGNESS-TO-PAY ESTIMATES IN EUROPE? A VALIDITY TEST OF STATED PREFERENCES FOR HEPATITIS-B TREATMENTS

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BACKGROUND: Because health care is highly insured in Europe, many discrete-choice experiment (DCE) researchers have concerns about the feasibility of obtaining valid willingness-to-pay (WTP) estimates. OBJECTIVES: To test the validity of WTP estimates obtained from patient DCE data in 5 countries. METHODS: Adults with a self-reported physician diagnosis of hepatitis B in 4 European countries (France, Germany, Spain, and Italy) and Turkey completed a web-enabled, DCE. The survey presented participants with a series of 12 trade-off questions, each including a pair of hypothetical hepatitis-B treatments described by efficacy, two side-effect risks, weight of evidence, and cost. All the subjects saw cost levels of €0, €10, and €25. Half the subjects evaluated an additional cost level of €75 and half the subjects evaluated an additional cost level of €130 per month. RESULTS: 664 subjects completed the survey. About 15% of subjects refused to accept any tradeoffs between costs and outcome attributes, while the remainder perceived no significant difference between costs of €0 and €10. The difference in importance weights between the highest cost levels in each treatment arm was significantly different (P < 0.000). The importance weight of one additional euro in cost of €25 or greater was negative, highly significant, and equal in both arms (p = 0.000). Compared to a treatment with 70% probability of achieving no detectable virus after 5 years and no side-effect risk, the increase in value to patients of a hypothetical treatment that has 95% effectiveness, 1% 5-year fracture risk, and 1% 5-year risk of kidney disease is an additional €34 (€17–451) per month. CONCLUSIONS: We obtained DCE responses in a split-sample test of cost sensitivity that were consistent with theoretical requirements. Results suggest that it is possible to obtain valid WTP estimates in a properly motivated European DCE.

MENTAL HEALTH – Clinical Outcomes Studies

THE EFFICACY OF DONEPEZIL AND MEMANTINE FOR TREATING BEHAVIOURAL AND PSYCHOLOGICAL SYMPTOMS OF DEMENTIA (BPSD) IN PATIENTS WITH ALZHEIMER’S DISEASE: SYSTEMATIC REVIEW AND META-ANALYSIS

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OBJECTIVES: Behavioral and psychological symptoms of dementia (BPSD) in Alzheimer’s disease (AD) greatly increase caregiver burden and often trigger nursing home placement. A systematic review of double-blind randomized controlled trials (RCTs) was conducted to compare the ability of donepezil and memantine to manage BPSD in AD. METHODS: MEDLINE, EMBASE, Cochrane Library, and hand searches identified 4739 citations, of which 16 studies had Neuropsychiatric Inventory (NPI) data suitable for meta-analysis (6 memantine and 10 donepezil trials). All trials were placebo-controlled, and no head-to-head comparisons of the two drugs were identified. A random-effects meta-analysis was conducted using AD severity subgroups to investigate heterogeneity between trials. Thereafter meta-regression was conducted using study level covariates as potential predictors of between-treatment weighted mean difference (WMD) in NPI score. RESULTS: Unadjusted random effects meta-analysis of all 16 RCTs found significant between-study heterogeneity (all studies F = 64.4%; donepezil vs. placebo WMD −1.84, 95% CI −3.37, −0.30, I² = 61%; memantine monotherapy vs. placebo WMD −1.19, 95% CI −3.70, 1.32, I² = 68.7%; memantine + AChEI combination therapy vs. placebo WMD −1.68 95% CI −1.70, 2.33, I² = 80.4%). Meta-regression that stratified studies into four AD severity groups measured by Mini-Mental State Exam (MMSE) (severe 0–9, moderately-severe 10–14, moderate 15–20 and mild 21–26) and controlling for age at baseline, found these covariates accounted for most (59.8%) of the between-study variance. Using this meta-regression model, the pooled NPI score for donepezil showed significant improvement compared to placebo (MD −1.10, 95% CI −2.63, −0.16) whereas this was not the case for memantine vs. placebo (MD −1.25, 95% CI −2.63, 0.13). CONCLUSIONS: Donepezil was associated with significant improvement in the management of BPSD in AD patients compared to placebo, whereas memantine failed to show a significant improvement versus placebo in the management of these symptoms.

COMPARING ALL-CAUSE MEDICATION DISCONTINUATION WITH DEPOT AND ORAL ANTIPSYCHOTICS IN MATCHED COHORTS OF PATIENTS WITH SCHIZOPHRENIA: A 12-MONTH OBSERVATIONAL STUDY

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OBJECTIVES: To assess the all-cause medication discontinuation rate in matched cohorts of patients with schizophrenia at risk of nonadherence who were initiated on depot or oral antipsychotics and followed over 12 months. METHODS: At study entry, patients with schizophrenia from Australia, Mexico, Romania, and Taiwan were switched, due to clinician-perceived medication non-adherence risk, from their current oral antipsychotic to either a depot or different oral antipsychotic in this 12-month, prospective observational study. Patients were compared on all-cause medication discontination rates, defined as a switch from the initiated medication or its augmentation with another antipsychotic. Patients initiated on depot were matched with those initiated on any oral antipsychotic, using full optimal and nearest neighbour (greedy) matching algorithms. The Rank-based Mahalanobis metric was chosen as the distance based on propensity score plus other relevant covariates, with country and antipsychotic class used for exact matching. RESULTS: Based on the full optimal 1:1 matching, only 40 of the 43 original depot initiators were matched to a corresponding oral initiator. After matching, there were no statistically significant differences between the depot and oral cohorts on any of the study entry covariates examined. During the 12 months of study, 20% of depot patients discontinued their initial medication, com- pared with 40% of oral patients (survival curve comparison, p = 0.025; Hazard Ratio = 0.31 [0.12, 0.92], p = 0.033, NNT = [6, 34]). No statistically significant differences were found between the two groups on other assessed outcomes, including hospitalization, length of stay, and quality of life measures. CONCLUSIONS: Systematic matching of patients initiated on depot with those initiated on oral antipsychotics showed that the oral-initiated patients were statistically significantly more likely to discontinue their medication. Findings highlight the importance of systematic matching of patient cohorts when comparing treatment outcomes in observational studies.

DETERMINANTS OF PSYCHIATRIC HOSPITAL ADMISSION IN SCHIZOPHRENIA

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OBJECTIVES: Hospital admission is a common and costly event in schizophrenia. An analysis of phase I/1A CATIE clinical trial data assessed various patient socio-demographic and clinical characteristics in relation to risk of psychiatric hospital admission. METHODS: We followed 1460 study participants from baseline until first schizophrenia-related hospital admission, study medication discontinuation, or 18 months. Stepwise Cox regression models assessed the adjusted hazard ratio (AHR) of hospital admission by baseline patient socio-demographic and clinical characteristics. RESULTS: In 869 person-years of follow-up, 203 patients were hospitalized. The adjusted hazards of hospital admission were not significantly related to patient socio-demographic characteristics. Increased risk of admission was linked to early age (<17 years) of first antipsychotic treatment (AHR: 2.09; 95% CI: 1.45–3.02), psychiatric hospital admission in past year (AHR: 2.92; 95% CI: 1.28–1.99), and DSM-IV alcohol (AHR: 1.55; 95% CI: 1.15–2.08) and drug (AHR: 1.50, 95% CI: 1.13–2.00) use disorders in the past 5 years. Severe (5–7) as compared with mild (1–3) baseline global clinical severity (AHR: 1.51; 95% CI: 1.03–2.23) (CGI-I, high ) as compared with low (7–13) positive symptoms (AHR: 1.53; 95% CI: 1.08–2.16) (FAPS-positive subscale), and low (0–2) as compared with high (≥3.1) social function (AHR: 1.47; 95% CI: 1.04–2.08) (Heinrichs-Carpenter QLI) were related to significantly increased risk of hospital admission. As compared with olanzapine treatment assignment, quetiapine (AHR: 2.12; 95% CI: 1.37–3.27), perphenazine (AHR: 1.64; 95% CI: 1.02–2.65), and ziprasidone (AHR: 2.47; 95% CI: 1.64–3.9), though not risperidone (AHR: 1.40; 95% CI: 0.89–2.21), were also associated with increased hospital admission risk. Self-rated physical health (SF-12 PCS) and drug attitudes (DAI) were not significantly related to risk. CONCLUSIONS: In the treatment of schizo- phrenia, efforts to lower hospital admission risk should focus on patients with early onset disorders, recent inpatient admissions, severe positive symptoms, high global clinical severity, poor social function, and comorbid substance use disorders and should select an appropriate antipsychotic medication.

A PHASE IV STUDY OF THE EFFECTIVENESS OF QUETIAPINE EXTENDED RELEASE 600 MG ONCE A DAY TO CONTROL THE SYMPTOMS OF MANIC PHASE OF BIPOLAR DISORDER: THE EMMY TRIAL

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OBJECTIVES: To assess the efficacy of a 600 mg/day dose of Quetiapine Extended Release administered once a day at evening as monotherapy or in combination with lithium or valproate for 21 days. METHODS: A multi-center phase IV study was designed to assess the efficacy of quetiapine extended release 600 mg per day either as monotherapy or combined therapy with lithium and valproic acid in the treatment
of patients with mania associated to Bipolar Disorder assessed by change in the Young Mania Rating Scale (YMRS) score and Clinical Global Impression (CGI) score from inclusion to day 21. Quality of life and safety/tolerability were measured with the Euro Quality of Life 5 Dimensions (EQ5D), Work Productivity and Activity Impairment, Barnes Akathisia Rating Scale, Simpson-Angus Scale, physical examinations, adverse events, change of weight and other adverse events of special interest. The efficacy analysis was based on the modified intention-to-treat population, that included all patients who received study medication and who had a YMRS assessment at inclusion and at least one YMRS valid assessment after inclusion resulting in a total of 88 patients. RESULTS: YMRS total score reduction in 21 days was 20.55 points (95% CI, 22.82–18.27); P < 0.0001. CGI total score decreased in 2.41 units, (95% CI, 2.69–2.13); P < 0.0001. The EQ5D index increased 0.21 points (95% CI, 0.16–0.27) P < 0.0001. Anal. Scale increased 23.49% (95% CI, 16.36%–30.61%); P < 0.0001. CONCLUSIONS: Overall results shown in this study demonstrate an improvement in the control of patients in manic phase of bipolar disorder with an increase in Quality of Life.

PMH5

ESTABLISHING THE COMPARATIVE EFFICACY OF ALZHEIMER’S DISEASE THERAPY THROUGH SYSTEMATIC REVIEW AND COMPARATIVE ANALYSIS

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OBJECTIVES: For therapeutic augmentation of impaired cholinergic transmission in Alzheimer Disease (AD), Acetylcholine-Esterase-inhibitors (ACHE-I; galantamine, donepezil, rivastigmine) are approved therapies in mild to-moderate AD. The NMDA receptor partial antagonist (memantine) is licensed for therapy of moderate-severe AD. In order to inform clinical decision-making about efficacy, safety and broader non-cognitive outcomes, we identified evidence from comparative and non-comparative studies. METHODS: A comprehensive search was conducted on Medline, Embase, conference abstracts and the Cochrane Library aimed to identify all randomised, placebo controlled trials (RCTs) reporting efficacy and/or safety outcomes and randomised, controlled comparative trials. In a second step, trials with drug dosing outside the approved European Summary of Product Characteristics were excluded. Eligibility of trials was assessed by two blinded reviewers; quality of trials were assessed by CONSORT. Meta-analyses were performed, reporting fixed and random effects using comparative analytical techniques. RESULTS: Fifty-eight studies were included in the current analysis. In 45 trials, ACHE-I were tested in placebo-controlled trials in 9 trials against another ACHE-I. For memantine, 9 placebo-controlled trials were identified. In most trials, patients were treated between 12–30 weeks; 9 RCTs reported long-term outcomes, up to 24 months. After critical appraisal, 33 studies were included in further analyses. Meta-analysis of effects on cognition (ADAS-cog, MMSE, SLB) showed superiority of at least one ACHE-I versus placebo at the 3 months, 6 months and longer-time timepoint. Results for memantine indicated non-significant improvement at any assessed timepoint. Behavioural outcomes were less well reported but showed superiority versus placebo for galantamine and memantine measured by the Neuropsychiatric Inventory Scale. CONCLUSIONS: There is abundant evidence for the efficacy, safety and tolerability of ACHE-I in the treatment of patients with mild to moderate AD. Data for improved behavioural functioning is limited though the Neuropsychiatric Inventory Scale. For memantine, 9 placebo-controlled trials were assessed by CONSORT. Meta-analyses were performed, reporting fixed and random effects of special interest. The efficacy analysis was based on the modified intention-to-treat population, that included all patients who received study medication and who had a YMRS assessment at inclusion and at least one YMRS valid assessment after inclusion resulting in a total of 88 patients. RESULTS: YMRS total score reduction in 21 days was 20.55 points (95% CI, 22.82–18.27); P < 0.0001. CGI total score decreased in 2.41 units, (95% CI, 2.69–2.13); P < 0.0001. The EQ5D index increased 0.21 points (95% CI, 0.16–0.27) P < 0.0001. Anal. Scale increased 23.49% (95% CI, 16.36%–30.61%); P < 0.0001. CONCLUSIONS: Overall results shown in this study demonstrate an improvement in the control of patients in manic phase of bipolar disorder with an increase in Quality of Life.

PMH6

INCREASING ADMINISTRATIVE PREVALENCE OF ATTENTION-DEFICIT/ HYPERACTIVITY DISORDER (ADHD) IN JAPAN: EVIDENCE FROM NORDBADDEN, 2003 TO 2008

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BACKGROUND: In our age and gender specific analyses for calendar year 2003, we observed an administrative prevalence rate of ADHD in Nordbadden (a region in the South-West of Germany with a population of ~2.7 million) of 0.53%, with a peak amplitude of 0.84% in age group 6–12 years. From 2003 to 2008, methylphenidate prescriptions (defined daily doses, DDDs) in Germany increased 2.63-fold, raising concern about potentially inappropriate use. OBJECTIVES: To establish a longitudinal ADHD patient database and to assess changes of ADHD administrative prevalence rates by age and gender during the period from 2003 to 2008, in order to lay the foundation for further analyses of treatment and prescribing patterns. METHODS: The complete claims database of the organization of physicians registered with statutory health insurance (SHI) [Kassenaerztliche Vereinigung, KV] in Nordbadden/Germany was available for analysis after inclusion of the total regional population enrolled in SHI (~2.7 million). Age and gender specific 1-year prevalence rates of ADHD were determined for years 2003 through 2008. RESULTS: During the 6-year period under study, the overall one-year ADHD prevalence rate increased from 0.53% to 0.90%. ADHD (hyperkinetic disorder: ICD-10, P90.0, P90.1) prevalence rates were highest in the age group 6–12 years [peak 2008] among nine-year-old children, 9.55%; boys, 12.31%; increasing continuously during the observation period (a) group 6–12: from 4.75% (boys, 6.91%; girls, 2.46%) to 7.62% (boys, 10.44%; girls, 4.66%); (b) age group 13–17: from 1.73% (boys, 2.66%; girls, 0.75%) to 3.78% (boys, 5.69%; girls, 1.74%); (c) children age >18 years: from 0.04% (males, 0.05%); females, 0.01%) to 0.14% (males, 0.18%; females, 0.10%). CONCLUSIONS: German methylphenidate prescription growth outpaced the increase in ADHD diagnoses from 2003 to 2008. Further research seems warranted and has been initiated with regard to the underlying dynamics of physician group involvement, coexisting conditions, utilization patterns (treatment duration, intensity, switches), and regarding economic implications.

PMH7

USING DRUG DISPENSING DATA TO STUDY THE VALIDITY OF PARASKAVEDEKATRIAPHOBIA

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OBJECTIVES: From tales of Christian tradition to essays of 17th century physicians, Friday has been identified as a day of ill luck. Amongst all Fridays of the year however the one coinciding with the 13th day of the month is known to be associated with extreme misfortune. Therefore, the fate of persons born on Friday the 13th (F13) warrant investigation. We investigated the effect of being born on Friday the 13th conjunctive effect with full-moon (n = 154) and good Friday (n = 113).

PMH8

EXCESS MORTALITY RISK IN PATIENTS WITH PSYCHOSIS HOSPITALIZED IN JAPANESE NATIONAL MENTAL HOSPITALS

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OBJECTIVES: To examine the standardized mortality ratio (SMR) in inpatients with schizophrenia and related psychosis. METHODS: To compare the mortality risk in Japanese with psychosis with that of the general population, we utilized two large studies, called “the JESS2000” and “the JESS2000 Follow-up Study.” In the JESS2000 study, 2,309 psychotic patients who had been hospitalized in Japanese national mental hospitals as of September 1, 2000 were included. In the JESS2000 Follow-up Study, the JESS2000 patients were followed up and those who had died as of September 1, 2005 were identified retrospectively. The expected number of deaths was calculated by multiplying the number of patients in each gender- and age-specific subgroup by the mortality rate derived from the Japanese abridged life table and adding all of the figures in each of these subgroups. The SMR was calculated by the observed number of deaths, identified in the JESS2000 Follow-up Study, divided by the expected number. RESULTS: Of 2,309 original samples, 56.3% were male. On September 1, 2000, the mean age (SD) was 52.0 (14.6) years. The mean duration of hospitalization was 10.3 (12.0) years. The mean age at onset of psychosis was 23.7 (7.9) years. The deaths of 204 patients were confirmed as of September 1, 2005. Of these 204 deceased patients, 13 committed suicide, 6 died from accidents and 148 died of natural causes. No information regarding cause of death for the remaining 16 patients could be obtained. The expected numbers of deaths in this cohort was 109.6. Therefore the SMR for all causes in this cohort was estimated at 2.03 or more. CONCLUSIONS: Our findings were similar to the results of the systematic review by Saha et al, which reported the SMR for schizophrenia as 2.58.

Mental Health – Cost Studies

PMH9

BUDGET IMPACT ANALYSIS OF SERTINDOLE IN THE TREATMENT OF SCHIZOPHRENIA IN POLAND

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OBJECTIVES: To evaluate the financial consequences of sertrindole reimbursement for the Polish National Health Fund (NHF) budget. METHODS: Budget impact analysis was performed in a 3-year time horizon from two perspectives of NHF and a patient. Costs of oral antipsychotic drugs and EKG test of patients treated with sertrindole were included. Two future scenarios were estimated: 1) with reimbursement of sertrindole, and 2) without sertrindole reimbursement. Target population was estimated using...