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**PND31**

**HEALTH CARE RESOURCE UTILIZATION AND DIRECT MEDICAL COSTS AMONG PATIENTS WITH EPILEPSY IN TIANJIN, CHINA**

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**OBJECTIVES:** To assess usual health care resource utilization and direct medical costs for patients with epilepsy in Tianjin, China. METHODS: Cross-sectional data were obtained from 30% random sampling Urban Employee Basic Medical Insurance (UEBMI) claims of Tianjin from each year of 2008 to 2013. The epileptic patients with ≥ 1 diagnosis of epilepsy (ICD-10-CM G40/G41) before and in each calendar year were selected. All-case and epilepsy-related health care resource utilization and costs of inpatient, outpatient and special outpatient service were assessed and comparisons were conducted between "refractory" (treated with ≥ 2 AEDs in study period) and "non-refractory" patients (treated with ≤ 2 antiepileptic drugs in study period) using t-tests and chi-square tests. RESULTS: Over 5-year period (from 2009 to 2013), the prevalence increased from 0.84% to 3.05%. The sample patients aged 57.1 years, with 43.0% female and 15.9% of refractory in 2013. For epilepsy-related health services, 17.6% of patients experienced ≥ 1 hospitalizations in 2013, with decreased mean length of stay (2009: 48.5, 2013: 35.8) and 8.8% of patients experienced ≥ 1 outpatient visits in 2013, while the corresponding proportions for special outpatient visits were 13.4% with increased mean number of visits (2009: 36, 2013: 14.0). The epilepsy-related costs per patient decreased from 2009 ($1346) to 2013 ($1210), among them the drug costs were the largest component (40.5%), followed by in-hospitalization costs (26.9%) and out-hospitalization costs (16.7%) and other costs including medical examinations (12.9 %). The all-cause costs stay relatively constant and were $2843 in 2013. Refractory cohort incurred significantly higher epilepsy-related costs than non-refractory cohort ($2237 vs $921, P < 0.0001), which was driven by higher hospitalization rates (26% vs 16%, P = 0.001). CONCLUSIONS: A decreased trend of annual epilepsy-related costs over a five-year period was associated with the less uses of inpatient services. Refractory epilepsy patients had as twice as much the cost of non-refractory patients.

**PND32**

**THE INDIRECT COSTS OF MULTIPLE SCLEROSIS ASSOCIATED WITH ABSENCE FROM WORK IN POLAND**

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**OBJECTIVES:** The aim of the study was to assess the indirect costs associated with multiple sclerosis (MS) from the perspective of the Social Insurance Institution (ZUS) in Poland. METHODS: The estimates were based on data from the Social Insurance Institution referring to year 2013 and focused on absenteeism due to the illness of one member of the family, short-term disability due to rehabilitation benefits, and the burden of permanent (or long-term) disability due to disability pension in Poland. Cost analysis was performed based on the Human Capital Approach taking into account Gross Domestic Product (GDP) per capita (€2578 EUR) and Added (GVA) per worker (€24,680 EUR).

**RESULTS:** Total indirect costs of MS associated with absenteeism in the year 2013 in Poland were €359,257 (GDP per capita) and €862,683 (GVA per worker). The indirect cost of short-term disability for one entitlement to the benefit represented 9% and 3% of total indirect costs of MS associated with absenteeism, respectively. Indirect cost of short-term disability for one entitlement to the benefit in 2013 in Poland generated very high costs (GDP per worker), and unlimited period 359,257 EUR (GDP per capita) and 862,683 EUR (GVA per worker) respectively. The annual societal cost per patient was estimated as €33,890 for the NAb+ and €30,790 for the NAb-. The increase of the annual total costs specifically due to the NAb+ status was $13,100 from the Italian societal perspective and $1,111 from the Italian NHS perspective. Applying the average NAb+ incidence rate, calculated in the Italian observational study (13.7%), to the current Italian MS population treated with IFNβ1a, the total annual cost increases of approximately 3.5 million from the NHS perspective and 9.9 million from the societal perspective were estimated. The results of this economic evaluation suggest the association between NAb+ status and increased costs for the management of RRMS. Further pharmacoeconomic research will be needed to confirm this first result.

**PND35**

**THE ECONOMIC BURDEN OF BRAIN DISORDERS IN KOREA**

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**OBJECTIVES:** The purpose of this study was to estimate the economic burden of brain disorders and provide relevant information to support health policy for people with brain disorders in Korea. METHODS: The economic burden of brain disorders in Korea was estimated on the basis of direct and indirect costs using a prevalence-based approach. Data were retrieved from the nationwide databases between 2008 and 2011: Korea National Health Insurance Corporation, the National Disability Registry of Ministry of Health and Welfare, the Korea National Statistical Office. RESULTS: The results of this economic evaluation suggested that the annual mean cost per patient was estimated as $1,559 vs. $641, hospice ($4,505 vs. $546) and total costs ($29,176 vs. $12,116; all p-values <0.001). CONCLUSIONS: AD is associated with a significantly higher economic burden compared to a control cohort.

**PND34**

**THE COST OF PATIENTS WITH RELAPSING-REMITTING MULTIPLE SCLEROSIS WHO DEVELOP NEUTRALIZING ANTIBODIES WHILE TREATED WITH INTERFERON BETA**

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**OBJECTIVES:** Relapsing-Remitting Multiple Sclerosis (RRMS) patients treated with IFNβ1a may develop neutralizing antibodies (NAb) that reduce treatment efficacy. Several clinical studies explored the association of NAb+ status with increased disease activity. The impact of NAb+ on costs has not been widely explored. The aim of this study was to estimate the cost of RRMS patients who develop NAb+ with treated with IFNβ1a by the Italian National Healthcare Service (NHs) and the Italian Society perspectives. METHODS: The study was based on a mixed method approach, based on both already published observational clinical datasets from Italian and study cohorts of RRMS patients treated with IFNβ1a, and cost data derived from the published literature. Direct and indirect costs were applied stratifying patients by EDSS 0-3 and 4-6. The average rate of NAb+ trends in treated patients calculated in the Italian observational study was applied to the current Italian MS population treated with IFNβ1a. The values were inflated to Euro 2014. RESULTS: The direct cost per patient was estimated as €15,628 for the NAb+ and €11,782 for the NAb-. The total societal cost per patient was estimated as €33,890 for the NAb+ and €30,790 for the NAb-. The increase of the annual total costs specifically due to the NAb+ status was €3,100 from the Italian societal perspective and €1,111 from the Italian NHS perspective. Applying the average NAb+ incidence rate, calculated in the Italian observational study (13.7%), to the current Italian MS population treated with IFNβ1a, the total annual cost increases of approximately 3.5 million from the NHS perspective and 9.9 million from the societal perspective were estimated. The results of this economic evaluation suggested the association between NAb+ and increased costs for the management of RRMS. Further pharmacoeconomic research will be needed to confirm this first result.

**PND36**

**AN UPDATE ON HEALTHCARE RESOURCE USE AND ECONOMIC BURDEN IN ALZHEIMER’S DISEASE IN THE UNITED STATES (US) FROM A MEDICARE SAMPLE ANALYSIS**

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**OBJECTIVES:** Estimate the economic burden and healthcare utilization of patients diagnosed with Alzheimer’s disease (AD). METHODS: Patients diagnosed with AD (International Classification of Diseases, 9th Revision, Clinical Modification code 331.0 and ≥1 anti-AD prescription [donepezil, rivastigmine, galantamine, memantine] or a second AD diagnosis) were identified using 5% national Medicare data (N=200,015–513,320) between the index date and follow-up length were assigned to each matched pair. Patients were required to be aged 65-100 years, with continuous medical and pharmacy benefits for 24 months pre- and 6 months post-index date, and were followed until the earliest date of death, disenrollment or study end. One-on-one matching of antiepileptic drug prescriptions were always preferred for the cheapest comparable drug. Additional cost if only prescribing brand antiepileptics. RESULTS: Data showing the number of antiepileptic prescriptions issued in English and Welsh general practices in 2014, and the associated net ingredient cost (NIC), were sourced from the HSCIC and NHS Wales and analysed using a proprietary in-house software.

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