SENSORY SYSTEMS DISORDERS - Cost Studies

PSS5
BEVACIZUMAB VERSUS RANIBIZUMAB FOR AGE-RELATED MACULAR DEGENERATION (AMD): A BUDGET IMPACT ANALYSIS
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OBJECTIVES: The use of intravitreal injection of vascular endothelial growth factor inhibitors for AMD and treat and has shown similar clinical effects of bevacizumab and ranibizumab. The aim of this study was to estimate the budget impact for Brazilian Ministry of Health (MoH) recommending ranibizumab instead of bevacizumab for AMD. METHODS: We did a deterministic budget impact analysis. Baseline data was obtained from the literature and the cost of bevacizumab and ranibizumab used for wet AMD. The target population was estimated by extrapolating epide-
miologic data to the Brazilian population. Data about dosage, administration and fractioning were extracted from literature. Prices were obtained with the Brazilian regulatory agency, applying potential discounting benefits. This analysis did not consider the cost of the fractioning process because it will be assumed by the states and not by the MoH. RESULTS: The considered price of the ranibizumab vial was US$ 96.82 (fractioning is not an option). In contrast, a 4 mL vial of bevacizumab would cost US$ 410.86 (US$ 5.14 each 0.05 mL dose, resulting in 80 doses/vial). Therefore, the expenses of one year on ranibizumab would be about US$ 11,554.37 and about US$ 61.63 for bevacizumab (12 injections for both). Thus, the use of ranibizumab instead of bevacizumab for treating 467,600 people would be related with US$ 3,374,278.55 budget impact. Sensitivity analyses also demon-
strated a budget impact of US$ 3,097,416,007.65 and US$ 2,587,555,101.51 (1 dose, vial and 20 doses/vial, respectively). CONCLUSIONS: Although not a label indica-
tion, bevacizumab has been widely adopted in clinical practice. As presented above, even with inefficient fractioning methods, the use of bevacizumab would bring substantial savings to MoH resources. Even the need of preserving the steril-
vial and 20 doses/vial, respectively).

PSS6
COST-OF-ILLNESS OF CHRONIC LYMPHOEDEMA PATIENTS IN HAMBURG AND SUBURBAN REGION
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OBJECTIVES: Chronic lymphoedema is of particular interest from the socioeconomic point of view, since it is accompanied with high costs, disease burden and permanent need of medical treatment. The economic and social impact can in-
crease if complications such as erysipelas and ulcers develop. Therefore, cost-of-
ilness of patients with lymphoedema or lipedema should be known. METHODS: Patients with chronic primary or secondary lymph- or lipedema of upper or lower limbs, with at most 6 months of disease duration, were enrolled in an observa-
tional, cross-sectional study in Hamburg and surroundings (population of approxi-
mately 4 Mio inhabitants, 90% of which are insured in the statutory health insur-
ance (SHI) and 10% in private insurance). Standardized clinical examinations and patient interviews were carried out. The oedemas were documented via digital photography as well as further available patient data. Resource utilizations were collected. From the societal perspective direct medical, non - medical and indirect costs were computed. RESULTS: A total of 348 patients were enrolled and inter-
viewed. 90.8% of them were female and had a mean age of 57.3 ± 14.5 years. Mean annual medical costs per lymphoedema patients were € 5552 expenses ($ 6496) and € 5552 expenses ($ 6496) and € 42% indirect (€4313) costs. The SHI accounted for about €1,694 to $2,490. The cost was $1,776 for patients with normal/mild vision loss, $1,845 for patients with moderate vision loss, and $3,007 for patients with severe vision loss/nearly blind. CONCLUSIONS: DME is associated with limi-
tations in functional ability and quality of life. In addition, the DME-related cost is substantial to the Canadian health care system.

PSS8
NON-INTERVENTIONAL STUDY ON THE BURDEN OF ILLNESS IN DIABETIC MACULAR EDEMA (DME) IN BELGIUM
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OBJECTIVES: To study real-life patient characteristics, treatment patterns and indirect costs associated with DME and to get an insight into the real-world economic impact. The study aimed to identify trends in the burden of disease, associated medical treatment and disability costs. METHODS: A retrospective, non-interventional study conducted across 6 provinces in Canada. At baseline, the mean VA was 20/60 (range: 20/20-20/200) across 6 provinces. Direct costs were calculated from resource use in medical records and official unit costs (€ 2011). Self-reported economic burden was collected via Short Form Health and Labour Questionnaire (SF-HLQ). Indirect costs (€ 2011) was obtained via personal expenses and caregiver burden (SF-HLQ). RESULTS: Thirteen Belgian ophthalmologists recruited 32, 12, 14 and 6 DME patients for VA categories ≥20/50, 20/63-20/160, 20/200-20/400 and <20/400 respectively. VA was stable during the study in 86% of patients. Recruitment for lower VA categories was difficult due to the long-term vision conservation with current treatments, lack of differentiation be-
tween lower categories in medical records and discontinuation of ophthalmolo-
gical care in lower categories. 75% of patients had bilateral DME. 68% were treated for DME during the study, of which 60% in both eyes. 50% received photocoagula-
tion, 33% intravitreal drugs. Less than 4% of patients had paid work, 17% received disability replacement income. Total direct medical costs in patients receiving active treatment ranged from €960 (lowest VA) to €3,058. 59% of direct costs were due to medical treatment and vision support, 39% to DME treatment. Indirect cost trends were less intuitive due to small samples and large variations. Annual costs grouped by 2 highest and 2 lowest VA levels, were respectively €114 and €312 for visual aids, €407 and €3,854 for home care. CONCLUSIONS: The majority of DME patients had bilateral disease. Except for the lowest VA, direct medical costs increased with VA decrease. Indirect costs were substantially higher at lower VA levels. Low sample sizes in some categories did not allow statistical analysis of cost differences.

PSS9
COST OF BLINDNESS AND VISUAL IMPAIRMENT IN SLOVAKIA
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OBJECTIVES: To measure the burden of the disease and provide a basis for the health care policy decisions. METHODS: The analysis was performed based on the several data sources. Data on prevalence of bilateral blindness and visual impair-
ment were obtained from the official Annual Report on the Ophthalmic Clinics of 2010. The economic analysis was performed from the Health Service provider per-
spective and reflects the real costs of health care payers in 2010. Information on health care and social expenditure were obtained from State Health and Social Insurance Funds. As detailed data on expenditures were not always available in a necessary structure, the missing data were collected in the retrospective patient survey. Both direct and indirect costs were evaluated and divided by the cost type and level of visual impairment. For the estimation of indirect costs Capital method was used. Patient survey was conducted on randomly collected geographically homogeneous sample of 89 respondents from all over Slovakia. RESULTS: A total of 17 201 persons with bilateral blindness or visual impairment were identified in 2010. Total yearly expenditures were 63 677 300 €. Direct costs counted only for 7% (4 468 112 €) of total costs and the most of them were caused by hospitalizations (4 001 539 €) and medical devices (307 739 €). The indirect costs counted for 59 209 188 €. The highest share represented loss of productivity (68%), followed by disability pensions (17%) and compensation of medical devices (14%). CONCLUSIONS: The evidence of cost-effectiveness must be demonstrated in order to get reimburse-
ment in Slovakia. According the Slovak guidelines indirect costs are accepted only in exceptional cases. Indirect costs of blindness and visual impairment are more than two thirds of total costs and therefore should be considered in health care policy evaluations.

PSS10
ECONOMIC BURDEN OF SEVERE VISUAL IMPAIRMENT AND BLINDNESS – A SYSTEMATIC REVIEW
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OBJECTIVES: Visual impairment and blindness pose a significant burden in terms of costs on the affected individual as well as society. In addition to a significant loss of quality of life associated with blindness and visual impairment, 81% of these impairments, a loss of independence leading to increased dependence on caretakers and inability to engage in income generat-
ing activities add to the overall societal cost. As there are currently next to no data capturing this impact available for Germany we conducted a systematic review of the literature to estimate the costs of visual impairment and blindness for Ger-
many and close this gap. METHODS: A systematic literature search of the main medical and economic information databases was conducted from January-April

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2012. Supplementary material was identified by a manual examination of literature. Additional studies were included for possible bias, resulting in a total of 30 included articles. The majority of studies focused on the cost-effectiveness of biologic treatments from the German Social Health Insurance (SHI) perspective. The objective of this study was to evaluate cost-effectiveness of biologic treatments from the German Social Health Insurance (SHI) perspective. METHODS: A simple decision model was constructed to assess the cost-effectiveness of biologics compared to supportive care for the treatment of moderate-to-severe psoriasis in Germany. The objective of this study is to evaluate cost-effectiveness of biologic treatments from the German Social Health Insurance (SHI) perspective. OBJECTIVES: To explore the incremental cost-effectiveness ratio (€/QALY) for each treatment over a one-year time horizon. One-way sensitivity analyses, where key parameters were changed to alternative plausible values, explored uncertainty in the results. RESULTS: In the base case, adalimumab was found to be the most cost-effective compared to supportive care (natural therapy) with a cost-effectiveness ratio of adalimumab being the most cost-effective for the treatment of patients affected by moderate to severe psoriasis.

**PSS13**

**COST-EFFECTIVENESS OF SPECIALIZED TREATMENT BASED ON COGNITIVE BEHAVIOURAL THERAPY VERSUS USUAL CARE FOR TINNITUS**

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**OBJECTIVES:** To determine the cost-effectiveness of cognitive behavioral therapy (CBT) for the treatment of moderate to severe tinnitus.

**METHODS:** A randomized controlled trial was conducted in The Netherlands. The economic evaluation was conducted from a societal perspective, using a one-year time horizon. The incremental cost-effectiveness ratio (ICER) was calculated by dividing the difference in costs by the difference in quality-adjusted life years (QALYs) between the two groups. The results showed that CBT was cost-effective compared to usual care, with an ICER of €22,583 per QALY gained. The study included 120 participants randomized to either CBT or usual care, with a follow-up period of one year. The primary outcome was QALYs gained, and the secondary outcome was the change in tinnitus severity as measured by the Tinnitus Handicap Inventory (THI).

**RESULTS:** The results showed that CBT was cost-effective compared to usual care, with an ICER of €22,583 per QALY gained. The study included 120 participants randomized to either CBT or usual care, with a follow-up period of one year. The primary outcome was QALYs gained, and the secondary outcome was the change in tinnitus severity as measured by the Tinnitus Handicap Inventory (THI).

**CONCLUSIONS:** CBT was found to be a cost-effective treatment for moderate to severe tinnitus, with an ICER of €22,583 per QALY gained. The study included 120 participants randomized to either CBT or usual care, with a follow-up period of one year. The primary outcome was QALYs gained, and the secondary outcome was the change in tinnitus severity as measured by the Tinnitus Handicap Inventory (THI).