**SENSORY SYSTEMS DISORDERS - Cost Studies**

**PSS5 BEVACIZUMAB VERSUS RANIBIZUMAB FOR AGE-RELATED MACULAR DEGENERATION (AMD): A BUDGET IMPACT ANALYSIS**

Zimmermann M1, Schnieder RE, Mosca M, Alexandre RF, de Nascimentos Jr JM, Gadelha CPA1

Ministry of Health, Brasilia, DF, Brazil

OBJECTIVES: The use of intravitreal injection of vascular endothelial growth factor inhibitors, bevacizumab and ranibizumab, 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 conducted in the Brazilian Ministry of Health (MoH) perspective. Cost drivers were reported for bevacizumab and ranibizumab for wet AMD. The target population was estimated by extrapolating epidemiologic 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$ 962.86 (fractionation is not an option). In contrast, a 4 ml vial of bevacizumab would cost US$ 410.86 (US$ 54 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 a US$ 3,097,416,007.65 and US$ 5,287,555,101.51 budget impact. The sensitivity analyses also demonstrated a budget impact of US$ 3,097,416,007.65 and US$ 2,987,555,101.51 (1 dose/vial and 20 doses/vial, respectively). CONCLUSIONS: Although not a label indication, bevacizumab has been widely adopted in clinical practice. As presented above, even with inefficient fractioning methods, the use of bevacizumab would bring a significant saving for MoH resource. Maintaining the possibility of the solution being a real-world worry, stability studies have shown the maintenance of the solution characteristics through adequate handling and storage.

**PSS6 COST-OF-ILLNESS OF CHRONIC LYMPHOEDEMA PATIENTS IN HAMBURG AND SUBURBAN REGION**

Purwins S1, Dietz D1, Blome C2, Heyer K1, Herberger K1, Augustin M2

1University Clinics of Hamburg, Hamburg, Germany, 2University Medical Center Hamburg, Hamburg, Germany

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 increase if complications such as erysipelas and ulcers develop. Therefore, cost-of-illness of patients with lymphoedema or lipoedema should be known. METHODS: Patients with chronic primary or secondary lymph- or lipoedema of upper or lower limbs, with at most 6 months of disease duration, were enrolled in an observational, cross-sectional study in Hamburg and surroundings (population of approx. 4 Mio inhabitants, 90.8% of which are insured in the statutory health insurance (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 interviewed. 90.8% of them were female and had a mean age of 57.3 ± 14.5 years. Mean annual direct medical costs were €17,201 persons with bilateral blindness or visual impairment were identified in 17,201 persons with bilateral blindness or visual impairment were identified in 2010. Total yearly expenditures were €63,677,300. Total yearly expenditures were €63,677,300 (lowest VA) to €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.

**PSS7 COST OF BLINDNESS AND VISUAL IMPAIRMENT IN SLOVAKIA**

Paszkova M1, Mackovcova S2, Ondrusova M3, Sallgassova P3

1Pharm-In, Ltd., Bratislava, Slovak Republic, 2Pharm-In, spol. s r.o., Bratislava, Slovak Republic, 3Pharm-In, Ltd., Bratislava, Slovak Republic

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 impairment were obtained from the official Annual Report on the Ophthalmic Clinics and the Eye and Vision Health Care Resource Informational System. Data on blindness and visual impairment in Slovakia were collected from the Health Care Informational System and the National Health Informational System. The analysis was conducted from the Health Care Informational System perspective 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 €. 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 reimbursement 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 ECONOMICAL BURDEN OF SEVERE VISUAL IMPAIRMENT AND BLINDNESS – A SYSTEMATIC REVIEW**

Kolbisch M1, Reifus K2, Finger B3

1University of Wuppertal, Wuppertal, Germany, 2University of Bonn, Bonn, Germany

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, 81% of these impairments, a loss of independence leading to increased dependence on caretakers and inability to engage in income generating 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 Germany and close this gap. METHODS: A systematic literature search of the main medical and economic information databases was conducted from January-April

At month 6, the mean VFQ-25 composite score was 79.6, the mean EQ-5D utility score was 0.78, and the EQ visual analogue score (VAS) was 71.0. The average monthly direct DME-related cost per patient was €2,092 across all patients (95% confidence interval: €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/nearblind. CONCLUSIONS: DME is associated with limitations in functional ability and quality of life. In addition, the DME-related cost is substantial to the Canadian health care system.