

SYSTEMIC DISORDERS/CONDITIONS – Cost Studies

PSY7

AN ECONOMIC EVALUATION OF RECOMBINANT ACTIVATED FACTOR VIIA ROOM TEMPERATURE STABLE IN THE MANAGEMENT OF HEMOPHILIA PATIENTS WITH INHIBITORS IN SERBIAPlun-Favreau J¹, Dimitrov DG², Celim³, Lukic J⁴¹Novo Nordisk, Zurich, Switzerland; ²Novo Nordisk s.r.o., Praha, Czech Republic; ³Novo Nordisk Pharma Sp z.o.o., Warsaw, Poland; ⁴Novo Nordisk Pharma d.o.o. Beograd, Belgrade, Serbia

OBJECTIVES: Recombinant activated factor VIIa room temperature stable (rFVIIa RTS) enables immediate access to treatment, which may lead to more rapid bleeding control and require less product compared to original rFVIIa, leading to cost savings despite the greater cost of rFVIIa RTS. The total annual cost of managing mild/moderate bleeds in one average hemophilia patient with high titre, high responding inhibitors by original rFVIIa and rFVIIa RTS was examined. **METHODS:** Only main medication costs were compared from the public payer perspective. Resource utilization and clinical outcomes were based on a review of international literature. Excel based budget impact model (BIM) was developed to assess the financial consequences of treating bleeding episodes with rFVIIa compared to current treatment practices. Cohort of individuals in BIM can be followed sequentially from bleed initiation, taking into consideration first-line efficacy, switching to other products, re-bleeds and bleed cessation. **RESULTS:** Patients with rFVIIa RTS were treated on an outpatient or home basis. First-line and second-line efficacy was assumed to be 92% for original rFVIIa and rFVIIa RTS. An early treatment with rFVIIa was associated with a lower incidence of re-bleeds compared to delayed treatment 5.2% vs. 13.7% and therefore with less product usage 2.1 vs. 2.3 doses per treatment line. Total annual costs per patient from initiation to cessation in the current treatment environment was CSD 12.58 million (€0.12 million). One-way sensitivity analyses showed that at price of rFVIIa RTS from 0% to 16% premium introduction of this new form can deliver savings for the Serbian health care budget due to immediate patients' access to the treatment. If not literature but current real life treatment patterns are considered savings can reach 56%. **CONCLUSIONS:** rFVIIa room temperature stable (RTS) in comparison to the original rFVIIa represents cost-saving first-line treatment option for the Serbian health care system.

PSY8

BUDGET IMPACT OF THE USE OF HYDROMORPHONE ONCE DAILY IN CHRONIC PAIN PATIENTS IN THE GERMAN HEALTH CARE SYSTEM—AN UPDATEFleischmann J, Wimmer A, Kubitz N
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OBJECTIVES: The budget impact of treating patients with severe chronic cancer and non-cancer pain with OROS[®] hydromorphone once-daily was determined in the German health care system. **METHODS:** An existing Excel[®] based hypothetical budget impact model (Fleischmann et al. 2008) calculating the cost consequences of using strong opioids (WHO step III) was updated using new market data (2009) and current prices (2010 public prices). The model has a one year time horizon adopting the perspective of the social health insurance accounting for costs of opioids, breakthrough pain and adverse events. Patient numbers are calculated using data from literature; adverse event rates are based on literature findings. Comparators included sustained-release morphine (twice-daily), controlled-release oxycodone (twice-daily), hydromorphone (twice-daily), transdermal fentanyl and transdermal buprenorphine. Initial prescription share of OROS[®] hydromorphone was 3.7% (2009). This share was hypothetically extended to 5%. It was assumed that this increase in prescription is gained by switching patients from their previous oral medication to OROS[®] hydromorphone. Titration and maintenance dosing schemes taken from previous analyses are used to model the switch. Morphine equivalents were chosen according to SmPC. **RESULTS:** The number of patients treated was estimated to be 810,608 per year. The model predicted that the expansion of OROS[®] HM would lower the per patient drug cost from €592.28 to €590.88. Due to generic entry drug cost per patient was considerably lower than in the previous version of the model (€679.52). The model also predicts that if the prescription share of OROS[®] HM increased to 5% the total budget for strong opioids would decrease by €1,135,086. **CONCLUSIONS:** Our analysis suggests that under current circumstances our finding from 2008 that extending the use of OROS[®] hydromorphone to treat patients with severe chronic pain will reduce the overall budget spent on strong opioids is still valid.

PSY9

THE ADMINISTRATION OF LIQUID INTRAVENOUS IMMUNOGLOBULINS IN SPAIN: A BUDGET IMPACT ANALYSIS TO ESTIMATE COSTS DUE TO AN INCREASING PRIVIGEN PENETRATIONDarba J¹, Restovic G², Kaskens L², de Agustin T³¹Universitat de Barcelona, Barcelona, Spain; ²BCN Health, Barcelona, Spain; ³CSL Behring, Esplugues de Llobregat, Spain

OBJECTIVES: To assess the economic impact for the Spanish health care system of the substitution of Flebogamma by Privigen in the Spanish market setting for liquid intravenous immunoglobulins (IVIGs) in 2009. **METHODS:** A budget impact model was developed with analyses based on Spanish data on disease prevalence, population forecasts, drug use, health care resource utilization and market shares. Data was obtained by literature research and consulting a panel of local clinical experts. The

perspective of the Spanish health care system was considered and a 5-year time horizon was evaluated. All costs referred to 2009 and a discount rate of 3% was applied. Indications of IVIGs included in this study were replacement therapy, immunomodulation and allogeneic bone marrow transplantation. Sub-indications of these primary indications were also considered distinguishing between children and adolescents vs. adults. IGIV treatments considered were Kiovig, Octagamocta, Flebogamma and Privigen. Direct medical annual costs per patient for each (sub-)indication were estimated before and after the substitution by Privigen. **RESULTS:** The target population for IVIG treatment was estimated to be 5743 in 2009, increasing to 6926 in 2014. Total costs for the next 5 years with the actual market share were estimated at €565 million. a minimum increase in Privigen's market share from 2% in the first year up to 12% in the fifth year- was considered. Under these circumstances, the estimated costs were €563€ million which represents a saving of €2 million for the Spanish health care system. **CONCLUSIONS:** An increase of Privigen's market share in Spain is likely to decrease the budget utilization of the health care system within the next 5 years. Savings are the result of less drug and administration costs per treated patient.

PSY10

A BUDGET IMPACT MODEL TO INVESTIGATE POTENTIAL COST SAVINGS ASSOCIATED WITH IMPROVEMENTS IN THE SAFETY PROFILE OF STRONG OPIOID ANALGESICSRuff L¹, Plich A¹, Liedgens H²¹Medaxial Group, London, UK; ²Gruenthal GmbH, Aachen, Germany

OBJECTIVES: The use of strong opioid analgesics to treat severe chronic pain is associated with adverse events (AEs) and treatment discontinuations, which can increase the overall cost of treatment. New interventions with more favourable safety profiles could reduce these costs. An economic model was constructed to investigate the potential budget savings associated with the introduction of an intervention with increased tolerability to a formulary. **METHODS:** A prevalence-based, deterministic budget impact model with a five-year time horizon was developed from the perspective of a UK health care budget-holder. The model takes into account drug acquisition, AE and discontinuation costs associated with the five most frequently-used strong opioid analgesics (WHO step 3) in the UK. Cost and usage data were derived from the British National Formulary, market research studies and physician interviews. AE and discontinuation rates were derived from published studies. **RESULTS:** In a theoretical population of 100,000 individuals, the model estimated that 205 patients experienced severe chronic pain and subsequently received strong opioid analgesics. The overall annual cost of treating these patients with currently-available strong opioid analgesics was estimated to be £152,426, 62% of which was spent managing AEs and discontinuations. Over five years, the model showed that if 50% of patients received an alternative strong analgesic which reduces the number of AEs and discontinuations by 25% (compared to currently-used strong opioid analgesics), there would be 198 fewer AEs and 58 fewer discontinuations. This would result in a cost saving of £51,985. **CONCLUSIONS:** The cost of managing AEs and discontinuations is a significant contributor to the overall treatment cost associated with strong opioid analgesics. New treatments with improved safety profiles may reduce the economic burden of managing AEs and discontinuations associated with the use of strong opioid analgesics. This may partially or even completely offset any potential increase in acquisition costs.

PSY11

COSTS OF SUPPORTIVE CARE (SC) FOR THE TREATMENT OF MYELODISPLASTIC SYNDROME (MDS) IN BRAZIL: AN ANALYSIS FROM THE PRIVATE PAYER'S PERSPECTIVEClark O¹, Teich V², Pereira ML³, Faleiros E¹, Clark LGO¹¹MedInsight-Evidências, Campinas, Brazil; ²MedInsight-Evidências, Rio de Janeiro, Brazil;³Janssen-Cilag, São José dos Campos, Brazil

OBJECTIVES: MDS is a rare hematological disease, that affects the production of blood cells. One of the goals of the treatment is to maintain the blood-cell count in near-normal levels. The means to achieve this are done mainly with the use of hematopoietic- growth factors and transfusions. Our objective was to determine the costs of this supportive treatment under the private payers perspective in Brazil, for patients with intermediate risk (INT) MDS. **METHODS:** We adapted the National Comprehensive Cancer Network (NCCN) for INT MDS decision tree to the reality of the Health care system in Brazil. Then, we calculated the costs for each branch of the tree, according to the local prices. We also simulated the total costs for a cohort of 100 patients, distributed in the branches according to the expected epidemiology. We assumed an horizon of one year of treatment. **RESULTS:** The mean cost of SC for MDS was US\$45,006/ patient/ year. This value can vary from US\$33,368 to US\$104,210, according to the patients' characteristics and types of treatments used. Overall, patients requiring the use of immunotherapy, with anti-tymocyte globulins were associated with the highest costs. Those achieving disease stabilization solely with the use of erythropoietin were associated with the lowest costs. **CONCLUSIONS:** The SC of SMD is associated with a mean cost of US\$45,000/patient/year in Brazil. New treatments have the potential to change this scenario if they can diminish the requirements for the costliest supportive procedures.