control glucémico tratados con diferentes combinaciones de hipoglucémiantes orales... una revisión de la biblia 

**DIABETES/ENDOCRINE DISORDERS – Cost Studies**

**PDB2**

**ANÁLISIS DE IMPACTO PRESUPUESTARIO DE LINAGLITINA ADICIONADA A METFORMINA EN EL TRATAMIENTO DE PACIENTES CON DIABETES MELLITUS II EN COLOMBIA**

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**RESUMEN:** Determinar el impacto sobre la unidad de pago por captación (UPC) de la utilización de linaclitina adicionada a metformina en pacientes con Diabetes Mellitus tipo 2 (DM2), con inadecuado control glucémico, en el sistema de salud colombiano.

La implementación de linaclitina, a través de una revisión del 50% frente a glinidnida/llmitina (incluida en el plan de beneficios del sistema de salud) se hizo un análisis de sensibilidad univariable haciendo variar la tasa de reemplazo. **RESULTADOS:** Dada una tasa de prevalencia de 0.04 y incidencia de 0.00273 de DM2 en Colombia, y el supuesto de que el 10% de los pacientes que requiere la intervención, el costo acumulado a 5 años, sería de US$ 2,143,066.35 tratados solo con glinidnidas/metformina, frente a US$ 2,067,115.59 si se usa linaclitina adicionada a metformina, con una participación del 50%. En el primer año, el impacto de la inclusión de linaclitina sobre el sistema de salud sería el 0.21% sobre el UPC. Del segundo al quinto año, se generarían ahorrillos sobre el UPC de 0.04%, 0.13%, 0.27% y 0.41%, respectivamente. Es decir, al cabo de cuatro años ya sería ahorrar. Remplazos mayores a 60% generarían más ahorrar al sistema.

**CONCLUSIONES:** La introducción de linaclitina adicionada metformina, en el plan de beneficios del sistema de salud colombianero sería notablemente menos costosa que la actual utilización de glinidnida/metformina, en un periodo de cinco años.

**PDB3**

**LONG-TERM COST COMPARISON BETWEEN PARICALCITOL AND CALCITRIOL FOR THE TREATMENT OF SECONDARY HYPERPARATHYROIDISM IN CHRONIC KIDNEY DISEASE IN MEXICO**

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**OBJECTIVES:** Assess cost burden related to drug use in a long term treatment (5 years) in patients with Secondary hyperparathyroidism (SHPT), considering hospitalization cost, erythropoietin (EPO) consumption and other direct health care costs from an institutional perspective. **METHODS:** A statistical model was developed to simulate an average Mexican patient resource usage in 5 years time-frame treated with two alternatives paricalcitol and calcitrol based on clinical data in published literature. Resource usage considered: SHPT treatment, drugs, EPO, hospitalization costs and medical supplies. Unit costs were collected from Mexican General Price Database and the Mexican Social Security (IMSS) official database, Official Journal of the Federation (DOF) and Banco de Mexico. Unvariable sensitivity analysis was executed. **RESULTS:** SHPT medication treatment cost were US$21.92 with calcitrol and US$10,658.00 with paricalcitol during five year period. No significant and consistent results of results for paricalcitol vs calcitrol. The net annual savings was also lower by US$4,910.88 in paricalcitol patients compared to calcitrol (p<0.05). During the first two years total costs for the patients treated with paricalcitol was slightly higher than those treated with calcitrol, US$41.7% (+1.7%), due to the peak of SHPT medication dosage which is reasonably higher than maintenance dosage. **CONCLUSIONS:** Based on this cost comparison model, from institutional perspective, paricalcitol treatment is less costly when the patient is treated with a middle-term (more than 2 years) or long-term (5 years perspective) at IMSS in Mexico.
9% of total cost of T2DM. The cost estimate was most sensitive to incidence and event cost of peripheral vascular disease, stroke and acute myocardial infarction. Based on the present analysis, T2DM places a significant financial burden on the health care system in Mexico, with cost of treating related complications being the main cost driver. Given the model focuses on diagnosed and treated T2DM patients, it is likely cost is higher when undiagnosed and untreated patients are considered. Delaying the onset of complications could result in a reduction in costs, as well as benefits for the patient and health care system.

PDB7  DIRECT COSTS OF TYPE 2 DIABETES FROM THE MEXICAN PUBLIC HEALTH CARE SECTOR PERSPECTIVE
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OBJECTIVES: This study aimed to quantify the annual financial cost of type 2 diabetes (T2DM) in Mexico and explore the relative contribution of different components of cost. METHODS: A cost of illness model was developed in Microsoft Excel 2007 to estimate the financial cost of T2DM in Brazil from the public health care payer perspective. Cost was measured as a set of direct costs including hospitalizations, intensive care stays, physician visits, medication cost, and complications. Data inputs for prevalence of T2DM (weighted to include only patients who are diagnosed and treated) and related complications, costs and routine management were sourced from the published literature and publicly available databases, where available. Key opinion leader input was sought to fill data gaps. Sensitivity analyses were conducted to identify parameters which were most likely to impact overall results when varied. Costs are presented in Brazilian Reais 2012. RESULTS: The annual cost of T2DM in Brazil is estimated to be 11.27,591,167 BRL (85,971,123,023 USD) which represents 5.3% of national health care expenditure. Costs of complications were estimated to account for 56% of the total cost of T2DM. Cardiovascular complications accounted for 32% of total T2DM cost, accounting for 31% of total T2DM health care spending. The overall cost estimate was most sensitive to the laser eye surgery, hemodialysis and cardiovascular complications. The cost of routine care, including medications and physician visits, is in a similar consultation. The findings indicate that there is a high economic burden of T2DM for the Brazilian health care system. Cost of treating related complications was the main driver. An even higher burden of the disease is expected if undiagnosed and patients currently not being treated start receiving public medical attention. The burden of the disease could considerably be reduced if T2DM related complications were avoided, which not only benefits the health care system but the patients as well.

PDB8  TRENDS IN HEALTH CARE RESOURCES UTILIZATION, COST AND MEDICATION SELECTION IN THE TREATMENT OF DIABETES
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OBJECTIVES: Diabetes is one of the most common chronic diseases in Canada. It affects about 6.8% of the Canadian population. Monitoring and managing the disease and its complications is associated with a significant economic burden. The objective of this study was to analyse trends in terms resource utilization, cost treatment and patterns in the management of diabetes. METHODS: Patients covered by the Quebec’s public health drug program known as RAMQ who had a diagnosis of diabetes, in 2005 and were covered continuously by the public drug program for the period from January 2006 to December 2010 were selected. Health care resources in terms of diabetes medications and physician visits and physician consultations in public health care. The trends in pharmaceutical expenditures were estimated over a 5-year period, from January 2006 to December 2010. The trends in terms of diabetes medication use and medication costs over the 5-year study period were estimated. RESULTS: A total of 46,194 diabetic patients were included in the study. The mean age of the study population was 65.4 years (SD=12.3) and proportion of male/female was 47% and 53% respectively. Over the study period, annual cost of diabetes medications varied from $1,550 (SD=464) in 2006 to $372 (SD=546) in 2010 (16%) while total cost of treatment associated with diabetes varied from $627 (SD=1456) to $715 (SD=1632) (16%) during that period. Medications remains the most widely used medication throughout the study period with 64.3% of users in 2006 and 65.6% in 2010. Proportion of insulin users increased from 15.2% to 22.7% while glitazones users increased from 4.4% to 11.2% during the study period. CONCLUSIONS: Over the five-year study period cost of diabetes treatment has increased in rate similar to inflation, while trends of increased adoption of insulin and newer medications is observed.

PDB9  COST-EFFECTIVENESS OF PARICALCITOL VERSUS PARATHYROIDECTOMY FOR SECONDARY HYPERPARATHYROIDISM TO CHRONIC KIDNEY DISEASE IN MEXICO
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OBJECTIVES: Secondary hyperparathyroidism (SHPT) affects one of every two Mexican patients on chronic kidney disease (CKD). The objective of this research was to assess cost-effectiveness (CE) of Paricalcitol intravenous administration (IV) versus parathyroidectomy (PTX) from Mexican payer perspective. METHODS: A decision tree model was used to simulate patient resource use and survival rate in 5 years time-frame treated with paricalcitol IV and parathyroidectomy based on clinical data in recent published literature. Time-frame begins when a patient is refractory toCalcitriol therapy and physician decides to treat with Paricalcitol or program PTX. Resource utilization and costs related with this condition were previously reported. Sensitivity analysis were just directly related to SHPT treatment: drug cost, surgery and hospitalization costs and medical supplies linked. Unit costs were collected from Mexican Government Databases: IMSS official database, Diagnosis Related Groups from IMSS, Optical Tumor of the Federal Health (6% considered 5% annual discount rate) Incremental Cost-Effectiveness Ratio (ICER) was calculated with treatment costs and life-years gained (LYG) offset based on incremental survival rate of compared therapies. Cost-effectiveness analysis was conducted with 5,000 simulated patients. RESULTS: Survival rate and confidence interval obtained from model was 0.63 (0.60, 0.66) for paricalcitol and 0.46 (0.44, 0.48) for PTX. Average survival of both therapies resulted in an incremental 0.61 LYG for paricalcitol patients (+18%). Average cost per QALY for PTX treatment was $50,000/500 mg and $300,000 per cycle PTX. Average cost per PFX was US$5,369,74(46%) resulting in an ICER of US$7,619.94 per LYG, which is 28.2% below Mexican Gross Domestic Product (GDP) per capita. Cost-effectiveness analysis showed 90% of cases treated had a quality-adjusted life-year (QALY) as a dominated outcome. CONCLUSION: According to results obtained and using a threshold of US$29,306.29 (3 x GDP per capita), Paricalcitol is a highly cost-effective treatment option compared to PTX when treating patients with SHPT at IMSS.