

CANA doses and SITA significantly reduced systolic blood pressure (CANA 100mg: 5.36 mmHg; CANA 300mg: 6.58 mmHg; SITA 3.34 mmHg), however, only CANA significantly reduced body weight (CANA 100mg: 2.5%; CANA 300mg: 2.9%) versus placebo. The objective of this study was to simulate the health outcomes and associated costs attributable to using CANA versus SITA in Mexico. **METHODS:** Forty-year outcomes associated with adding CANA 100mg or CANA 300mg versus SITA to MET were simulated using ECHO (Economic and Health Outcomes)-T2DM, a validated micro-simulation model. Treatment effects and patient characteristics were sourced from the trial. Simulated treatment was intensified when HbA<sub>1c</sub> exceeded 7.5% by adding basal insulin, and subsequently prandial insulin. Disutilities associated with micro- and macro-vascular events were obtained from the literature and costs were adapted to the Mexican setting. **RESULTS:** Using CANA 300mg versus SITA was projected to reduce relative risks for key events (e.g. myocardial infarction 10.2%; congestive heart failure 6.6%; macroalbuminuria 6.6%; microalbuminuria 6.2%), improve QALYs (0.046), and result in lower costs per patient (\$1927MXN). Simulation results of CANA 100mg versus SITA were generally similar, albeit estimates of reductions in relative risks, QALY gains and associated costs differences were smaller. **CONCLUSIONS:** These simulations suggest that using CANA versus SITA as an add-on to MET could result in improved outcomes and reduced costs in Mexico.

#### PDB13

##### ECONOMIC EVALUATION OF INSULIN LISPRO MIX 25 WITH GLARGINE IN THE TREATMENT OF TYPE 2 DIABETES MELLITUS PATIENTS IN THE MEXICAN PUBLIC HEALTH CARE SYSTEM IN MEXICO

Carlos F<sup>1</sup>, Ramírez-Gómez I<sup>2</sup>

<sup>1</sup>R A C Salud Consultores S.A. de C.V., México D.F., Mexico, <sup>2</sup>Eli Lilly and Company, México, Mexico

**OBJECTIVES:** Compare expected costs and health-outcomes in patients with Diabetes Mellitus Type 2 (DMT2) in the Public Sector in Mexico treated with glargine or 25%-insulin lispro, 75%-insulin lispro protamine suspension (LM25). **METHODS:** This analysis included a hypothetical cohort of insulin-naïve patients with T2DM, aged 30–80, years, with A1C > 7.0% taking antihyperglycemic drugs for 90 days. Effectiveness measures included; (1) Percentage of patients with A1C < 7.0% levels at 24 weeks, (2) frequency and type of micro and macrovascular complications (MMVC) and (3) hypoglycemic events per 1000 patients considering one-year timeframe. Costs evaluated were: 1) acquisition costs; 2) cost of hypoglycemic events; and 3) MMVC. Efficacy measures and mean-daily-dose was obtained from DURABLE, parallel, open-label and randomized study comparing directly LM25 and Glargine. Incidences of MMVC were estimated using data from UKPDS study group and data from Meta-analysis by Quayum following a similar process outlined by Grima. Acquisition costs were derived from the transparency portal of the Mexican Social Security Institute. Healthcare services utilization from hypoglycemic episodes were calculated according to international published literature and IMSS Unit Costs updated to 2013 following IMSS methodology, while other associated expenses with MMVC complications come from Mexican reports and Diagnostic Related Groups (DRG) published by IMSS this data was updated to January 2013 using the Bank of Mexico inflation calculator. Costs are expressed in 2013 USD (1USD=\$12.70MXN). **RESULTS:** All results consider 1000 patients treated in a 1-year timeframe. Acquisition costs for LM25 were lower compared to glargine (\$291,395 vs \$383,521, 24% lower), although costs per hypoglycemia events were higher for LM25 (\$12,242 vs. \$3,673). Direct medical costs for MMVC were higher for Glargine (\$668,027 vs. \$754,435) Total medical costs were higher for glargine compared to LM25 (\$971,663 vs. 1,141,628). **CONCLUSIONS:** Results of the present study suggest that compared with LM25, health care costs are significantly higher for glargine.

#### PDB14

##### HEALTH ECONOMIC BENEFITS OF SENSOR AUGMENTED INSULIN PUMP THERAPY IN COLOMBIA

Gomez A<sup>1</sup>, Alfonso-Cristancho R<sup>2</sup>, Prieto-Salamanca D<sup>3</sup>, Valencia JE<sup>4</sup>, Lynch P<sup>5</sup>, Roze C<sup>6</sup>

<sup>1</sup>Hospital Universitario de San Ignacio, Bogotá, Colombia, <sup>2</sup>University of Washington, Seattle, WA, USA, <sup>3</sup>RANDOM Foundation, Bogotá D.C., Colombia, <sup>4</sup>Medtronic Latin America Inc., Bogotá, Colombia, <sup>5</sup>Medtronic, Tolochenaz, Switzerland, <sup>6</sup>HEVA HEOR, Lyon, France

**OBJECTIVES:** To estimate the health economic impact of Sensor-Augmented Insulin Pump (SAP) Therapy among Insulin-Dependent Diabetes Mellitus (IDDM) patients in Colombia. **METHODS:** The Core Diabetes Model (CDM) is highly validated, computer simulation model to determine the long-term health outcomes and economic consequences of diabetes interventions. A recent real life clinical study in Colombia evaluating 217 IDDM patients (average baseline HbA<sub>1c</sub> of 8.97%, mean age 34 years, and average diabetes duration of 14 years) who initiated SAP therapy showed that SAP therapy led to a reduction of -1.47% HbA<sub>1c</sub> as well as a significant reduction in severe hypoglycaemic events. The impact of the reduction in the fear of hypoglycaemic events on quality of life was also included. **RESULTS:** Life expectancy of patients with SAP was increased by 3.51 years and diabetes related complications were delayed on average by 1.74 years. The Incremental-Cost-Effectiveness-Ratio (ICER) for SAP was \$44,889,916COP (\$24,939USD) per Quality-Adjusted-Life-Year gained based on direct costs only. SAP related therapy costs were partially offset by the savings due to the reduction in long-term complications, including proliferative diabetic retinopathy (PDR), Severe Vision Loss (SVL), End Stage Renal Disease (ESRD), and Amputations (AMP). The relative reduction in incidence of these complications (PDR 42%, SVL 20%, ESRD 46%, AMP 12%) as well as the average delay in their onset (4.9 years, 4.0 years, 3.8 years, 3.7 years, respectively) due to SAP therapy is profound. When including indirect costs, SAP demonstrated an even lower ICER. Extensive sensitivity analyses showed the robustness of the results. **CONCLUSIONS:** Using a payer's perspective, our analysis showed that SAP is cost-effective over a lifetime horizon in IDDM patients in the Colombian setting (using a WTP threshold of \$60,771,600COP [3x GDP]) and can lead to an increase in life expectancy. When using a societal perspective, SAP was even more cost-effective.

#### PDB15

##### SHORT AND LONG-TERM COST-EFFECTIVENESS OF SWITCHING THERAPY FROM NPH INSULIN TO INSULIN DETEMIR IN PEOPLE WITH TYPE 2 DIABETES

Home PD<sup>1</sup>, Malek R<sup>2</sup>, Gálvez GC<sup>3</sup>, Hammerby E<sup>4</sup>, Nikolajsen A<sup>4</sup>, Henriksen O<sup>5</sup>, Andersen MFB<sup>5</sup>

<sup>1</sup>University of Newcastle upon Tyne, Newcastle upon Tyne, UK, <sup>2</sup>Internal Medicine, CHU Setif, Sétif, Algeria, <sup>3</sup>Instituto Jalisciense de Investigación en Diabetes y Obesidad, Guadaluajara, Mexico, <sup>4</sup>Novo Nordisk A/S, Søborg, Denmark, <sup>5</sup>Last Mile P/S, Copenhagen K, Denmark

**OBJECTIVES:** To assess the cost-effectiveness (CE) of switching from NPH insulin ± oral glucose-lowering drugs (OGLDs) to insulin detemir ± OGLDs in people with type 2 diabetes (T2DM) in countries in different economic circumstances based on observational data gathered in routine clinical practice. **METHODS:** The A<sub>1</sub>chieve<sup>®</sup> study assessed safety and outcomes over 24 weeks in 66,726 people with T2DM starting insulin analog therapy. Most people (96%) stated better glycemic control as reason to switching therapy, with 31% also stating hypoglycemia problems as a further reason. The CE analyses included data for people switching to detemir in South Korea (n=90) and in seven Arabian Gulf countries (n=124). Data were collected on clinical effectiveness and adverse events, and health-related quality of life using the EQ-5D questionnaire. CE analyses used the IMS CORE diabetes model with 1 and 30 year time horizons, with South Korea and Saudi Arabia country-specific costs for complications and therapies and background mortality rates. CE was measured by comparing outcomes at study-end with outcomes at pre-study. Incremental cost-effectiveness ratios (ICERs) are expressed as cost per QALY in local currencies, USD and in fractions of local GDP per capita. CE was pre-defined using the WHO definition of <3 times GDP per capita. **RESULTS:** 1-year ICERs were: South Korea (KWR 3,236,798; USD 2,980; GDP 0.13), and Saudi Arabia (SAR 27,221; USD 7,258; GDP 0.36). 30-year ICERs were: South Korea (KWR 872,589; USD 803; GDP 0.04), and Saudi Arabia (SAR 6,349; USD 1,693; GDP 0.08). Sensitivity analyses covering cost of self-monitoring, deterioration of glucose control with time, and other time horizons showed the results to be robust. **CONCLUSIONS:** Switching from NPH±OGLDs to detemir±OGLDs in people with T2DM as performed in the A<sub>1</sub>chieve<sup>®</sup> study was found to be cost-effective in both country settings at 1 and 30 year time horizons.

#### PDB16

##### SHORT AND LONG-TERM COST-EFFECTIVENESS OF SWITCHING THERAPY FROM INSULIN GLARGINE TO INSULIN DETEMIR IN PEOPLE WITH TYPE 2 DIABETES

Malek R<sup>1</sup>, Gálvez GC<sup>2</sup>, Hammerby E<sup>3</sup>, Nikolajsen A<sup>3</sup>, Henriksen O<sup>4</sup>, Andersen MFB<sup>4</sup>

<sup>1</sup>Internal Medicine, CHU Setif, Sétif, Algeria, <sup>2</sup>Instituto Jalisciense de Investigación en Diabetes y Obesidad, Guadaluajara, Mexico, <sup>3</sup>Novo Nordisk A/S, Søborg, Denmark, <sup>4</sup>Last Mile P/S, Copenhagen K, Denmark

**OBJECTIVES:** To assess the cost-effectiveness (CE) of switching from insulin glargine ± oral glucose-lowering drugs (OGLDs) to insulin detemir ± OGLDs in people with type 2 diabetes (T2DM) in Saudi Arabia, South Korea and Algeria based on observational data gathered in routine clinical practice. **METHODS:** The A<sub>1</sub>chieve<sup>®</sup> study assessed safety and outcomes over 24 weeks in 66,726 people with T2DM starting insulin analog therapy. The CE analyses included people switching to detemir in Saudi Arabia (n=102), South Korea (n=82) and in 3 North-West African countries (n=94). Data were collected on clinical effectiveness and adverse events, and health-related quality of life using the EQ-5D questionnaire. CE analyses used the IMS CORE diabetes model with 1 and 30 year time horizons, with Saudi Arabia, South Korea and Algeria country-specific costs for complications and therapies and background mortality rates. Incremental cost-effectiveness ratios (ICERs) are expressed as cost per QALY in local currencies, USD and in fractions of local GDP per capita. CE was pre-defined using the WHO definition of <3 times GDP per capita. **RESULTS:** The switch was found to be less costly and have better outcomes in South Korea after 30 years and in Saudi Arabia at both time horizons. 1-year ICERs were: Saudi Arabia (SAR -5,849; USD -1,559; GDP -0.08), South Korea (KWR 296,842; USD 273; GDP 0.01), and Algeria (DZD 267,771; USD 3,363; GDP 0.80). 30-year ICERs were: Saudi Arabia (SAR -14,839; USD -3,957; GDP -0.19), South Korea (KWR -1,133,202; USD -1,043; GDP -0.05), and Algeria (DZD 226,818; USD 2,849; GDP 0.68). Sensitivity analyses on the 30 year time horizon showed the findings to be robust. **CONCLUSIONS:** Switching from glargine±OGLDs to detemir±OGLDs in T2DM as performed in the A<sub>1</sub>chieve<sup>®</sup> study was found to be cost-effective across all country settings at 1 and 30 year time horizons.

#### PDB18

##### IMPACTO DE LA DIABETES SOBRE LA PRODUCTIVIDAD EN ARGENTINA

Asteazarán S, Elgart J, Gagliardino JJ

CENEXA. Centro de Endocrinología Experimental y Aplicada (UNLP-CONICET La Plata), La Plata, Argentina, Buenos Aires, Argentina

**OBJECTIVOS:** Estimar y caracterizar el impacto de la enfermedad sobre la productividad laboral de personas con diabetes (DM) en Argentina. **METODOLOGÍAS:** Estudio descriptivo observacional relevando información mediante el cuestionario WPAI-GH (Work productivity and activity impairment - General Health version) en personas adultas (18 a 75 años) con DM, que concurren a su consulta habitual a dos centros asistenciales de La Plata. Los encuestados también respondieron sobre aspectos socioeconómicos y complicaciones de su enfermedad. La pérdida de productividad se estimó por el método del capital humano. Los resultados se presentan como media ± desvío estándar (DS) o proporciones. Para las comparaciones se utilizaron los test t de student, Kruskal-Wallis y Chi cuadrado, según correspondiera. Se consideró significativo p<0,05. **RESULTADOS:** Aceptaron participar en el estudio 73 personas con DM; 54,8% hombres con edad de 57 ± 15 años. El 42,5% poseía estudios superiores (nivel terciario o universitario completo). El 60,3% trabajaba, 6,4% estaba desempleado y el 33,3% inactivo (jubilado, pensionado). El tiempo promedio de trabajo fue de 43 ± 17 horas/semana y el 38% faltó/retiró de su trabajo por su enfermedad. El tiempo de trabajo perdido por ausentismo fue 9,1%, y por disminución de la productividad el 22%. La diabetes también disminuyó un 25% la capacidad para realizar actividades regulares diarias, afectando más a mujeres que a hombres (30 y 20,3%, respectivamente). La pérdida de productividad monetaria por ausentismo