

that reported the best HrQoL in Latin America were Uruguay and Paraguay. Brazil in contrast, reported the worst HrQoL, as it had the highest proportion of people reporting a poor or very poor health-status. When comparing HrQoL between countries using logistic regression, significant differences were found in the HrQoL for the 6 nations. Results persisted after adjusting for mentioned socio-demographic variables. **CONCLUSIONS:** Our study supported the usefulness and importance of measuring HrQoL and showed that real differences in self-perceived health exist between Latin American countries. Future research should consider cultural aspects like language, ethnicity or macro indicators such as unemployment rates or gross domestic product per capita in a multilevel analysis, for further understanding of HrQoL in Latin America.

MC3

PREDICCIÓN DEL RIESGO CARDIOVASCULAR EN PACIENTES DIABÉTICOS TIPO 2 UTILIZANDO ÁRBOLES DE DECISIÓN: PRUEBA DE CONCEPTO

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OBJECTIVOS: Según la WHO (OMS), la principal causa de muerte a nivel mundial hasta el año 2005 han sido las enfermedades crónicas (65%) y se espera que su incidencia aumente un 17% en los próximos diez años. El enfoque preventivo de estas enfermedades está cobrando máxima importancia, siendo particularmente relevante el poder determinar, de manera anticipada, las poblaciones de mayor riesgo. Se propone, utilizar nuevas herramientas de análisis de datos, buscando crear, mediante el modelamiento predictivo, conocimiento que sirva para generar acciones preventivas sobre los pacientes. **METODOLOGÍAS:** Se creó un repositorio con datos históricos de 397 pacientes del Centro de Diabetes de Clínica Las Condes (2000–2008). Se definieron 10 variables que, según la literatura, se consideran relevantes como factores de riesgo de padecer una enfermedad cardiovascular: sexo, edad, HbA1c, HDL, LDL, colesterol total, triglicéridos, presión sistólica, enfermedad coronaria anterior y tabaco. Utilizando técnicas data mining, específicamente técnicas de clasificación, se desarrolló un modelo basado en árboles de decisión, que permite predecir el nivel de riesgo que presentan los pacientes diabéticos tipo 2, de padecer una enfermedad cardiovascular. **RESULTADOS:** Los resultados obtenidos presentan un nivel de certeza de 63%, que indica cuán bien podrá funcionar el predictor para clasificar futuros casos que desconoce. El riesgo alto de padecer un evento cardiovascular se logra predecir con un 85% de precisión y, el bajo, con un 62.5%. Los predictores más probables asociados al riesgo alto de padecer una enfermedad cardiovascular, son: enfermedad coronaria previa, LDL > 100, HDL < 55, HbA1c > 7%, SBP > 130 y que el paciente sea fumador. **CONCLUSIONES:** La predicción del riesgo es fundamental para el éxito de intervenciones proactivas, permitiendo definir distintos niveles de intervención, con el propósito de obtener mejores resultados clínicos y costo efectivos. La aplicación de esta metodología en poblaciones con riesgo desconocido, podría facilitar el desarrollo de programas de disease management.

MC4

COMPARISON OF DATA AVAILABILITY AND QUALITY FOR PHARMACOECONOMIC ANALYSIS IN BRAZIL VERSUS THE UNITED STATES AND EUROPEAN UNION: THE CASES OF DIABETES & HYPERTENSION

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OBJECTIVES: To compare the availability and quality of data needed for pharmacoeconomic analysis in Brazil versus the US and EU, using diabetes and hypertension as case studies. **METHODS:** An extensive search was undertaken in Brazil for sources of epidemiologic, economic, outcomes, and life expectancy data needed for pharmacoeconomic analysis in the areas of diabetes and hypertension. Potential sources included the published literature, holdings of national health authorities and government statistical agencies, public and commercial insurers, pharmacy benefit management companies, and disease management firms. Identified data sources were evaluated according to five criteria: content; coverage; quality; reliability; and timeliness. Sources identified in Brazil were then compared with corresponding sources commonly used in the US and EU. **RESULTS:** Many of the data elements needed for pharmacoeconomic analysis were identifiable in Brazil and comparable to US and EU sources on the five evaluation criteria. These included the costs of prescription drugs and health care services used in the treatment of diabetes and hypertension as well as age-specific mortality rates and life expectancies, which are freely available from the government data system (DATASUS) and available for purchase from selected commercial database vendors. Notable gaps in requisite data in Brazil included large-scale longitudinal epidemiologic studies analogous to the UK Prospective Diabetes Study (UKPDS) and the US Framingham Heart Study, needed to estimate longitudinal risks of diabetes- or hypertension-related cardiovascular events. In addition, country-specific utility data of relevance to diabetes and hypertension were not found. **CONCLUSIONS:** Brazilian data sources are available and of sufficiently high quality to be used in pharmacoeconomic analyses in diabetes or hypertension. However, in the absence of Brazilian longitudinal epidemiologic data and disease-specific utilities, scientifically rigorous analyses for the Brazilian setting likely would require local adaptation of models and data from other countries in North America or Europe.

PODIUM SESSION II: COST STUDIES II

CS5

GASTOS ELEVADOS COM MEDICAMENTOS DO PROGRAMA DE MEDICAMENTOS EXCEPCIONAIS DO MINISTÉRIO DA SAÚDE/BRASIL

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OBJETIVOS: Analisar gastos elevados com medicamentos do Programa de Medicamentos Excepcionais do Ministério da Saúde. **MÉTODOS:** Trata-se de um estudo de gastos do Ministério da Saúde com medicamentos do Programa de Medicamentos Excepcionais. Os dados foram provenientes dos registros das Autorizações de Procedimentos de Alta Complexidade, obtidos por pareamento probabilístico-determinístico, o qual gerou uma coorte histórica com 611,419 indivíduos com registros de gastos no período de 2000–2004. Foram analisadas as características dos usuários que apresentaram gastos elevados no período de 2000–2004, que incluíram os gastos totais situados a partir do percentil 99, em uma distribuição de gastos feitos para cada indivíduo, ordenada em ordem crescente. Fez-se uma descrição segundo a distribuição etária, sexo, região de residência, medicamentos utilizado no início do tratamento e diagnóstico no início do tratamento, agrupados por capítulos da Classificação Internacional de Doenças (CID-10). **RESULTADOS:** Dentre os usuários, 6,114 indivíduos (1%) produziram os maiores gastos no período, num total de R\$772 milhões (26.3% do total). Desses pacientes, 55.1% eram do sexo feminino, 76.5% tinham de 20–59 anos (média de 36 anos) e 56.8% residiam na região sudeste. Os maiores gastos foram observados em maior frequência nos pacientes que iniciaram o tratamento utilizando imiglucerase e interferon (Beta 1a, 1b, alfa peguilado) e que tinham diagnóstico de doenças do sistema nervoso e de doenças endócrinas, nutricionais e metabólicas. **CONCLUSÕES:** Os medicamentos mais caros são responsáveis por altos gastos do Ministério da Saúde e destinados a uma pequena parcela da população, predominantemente adultos, residentes na região sudeste e portadores de doenças crônicas. Deve-se salientar a importância de sistemas universais de saúde, que possibilitem o acesso ao tratamento dessas doenças, mas que deve ser fundamentado no uso racional de medicamentos. A maioria da população não teria como arcar com estes gastos, tendo em vista a renda per capita nacional.

CS6

THE INTRODUCTION OF PRE-ENDOSCOPY (EGD) HIGH-DOSE INTRAVENOUS PROTON PUMP INHIBITION (HDIVPPI) IN THE MANAGEMENT OF PATIENTS WITH ACUTE UPPER GASTROINTESTINAL BLEEDING (UGIB)—A BUDGET IMPACT ANALYSIS

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OBJECTIVES: To quantify the budget impact of using HDIVPPI before EGD in ambulatory patients presenting with acute, overt UGIB in different clinical scenarios. **METHODS:** A decision tree compared pre-EGD HDIVPPI to none in a model that emulates contemporary standards of care. Patients were stratified by clinical likelihood of rebleeding (high/low), time to EGD, method of endoscopic hemostasis (epinephrine injection/other), and early discharge when clean-base ulcers are noted (frequent/rare). Probabilities and lengths of stay originated from the literature and bleeding registries. Hospital and additional pharmacological costs came from the Nationwide Inpatient Sample and Red Book (2008 \$US). Expert consensus was sought when needed. Esomeprazole was the PPI in the base-case. One-way deterministic sensitivity analyses were performed on all variables across wide pre-set ranges. Model time horizon was 30 days, adopting a third-party payer perspective. **RESULTS:** In the base-case, average costs were \$9139 for the pre-EGD HDIVPPI strategy and \$9029 for the arm without. This increment rose slightly amongst patients with a high clinical likelihood of rebleeding (\$117/pt) or when using only hemostatic methods other than epinephrine injection (\$128/pt). It dropped amongst patients undergoing epinephrine injection (\$95/pt) or a late EGD (\$37/pt). All mean costs were lowest, and this time favoring the HDIVPPI approach, when clean-base ulcer patients were discharged early (\$8,263 for HDIVPPI versus \$8,282 for none). In sensitivity analyses, variables with the greatest impact were the per diem cost of hospital stay complicated by rebleeding, and elapsed times to early or late EGD; overall per patient incremental costs varied from \$16–\$174. **CONCLUSIONS:** The introduction of HDIVPPI prior to EGD in a US managed care setting amongst acute UGIB patients in most scenarios raise modestly mean patient costs. This approach, however, becomes cheaper than no PPI administration pre-EGD when selected patients bleeding from clean-base ulcers are discharged home from the emergency room.

CS7

COST-EFFECTIVENESS AND BUDGET IMPACT OF INTRODUCING ROSUVASTATIN INTO THE BRAZILIAN NATIONAL DRUG FORMULARY

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OBJECTIVES: To assess the cost-effectiveness of Rosuvastatin in the treatment of hypercholesterolemia under the Brazilian Public Health Care System (SUS) perspective.