

quedó limitado al caso del CASMU, y el fondo de garantía previsto con recursos del FONASA, se sustituyó con un fondo de rentas generales, que supone un incremento potencial del gasto del Estado **LECCIONES APRENDIDAS:** Aunque no resulta novedoso, en primer lugar la experiencia pone de relieve de qué manera las decisiones políticas no siempre se alinean con el mejor diseño técnico para la solución del problema. Por otra parte, este caso en particular puso de manifiesto debilidades históricas del sistema, que la reforma aún no ha podido modificar, relacionadas con la calidad de las decisiones del regulador, y con su diseño institucional.

#### PODIUM SESSION I: COST STUDIES I

##### COST-EFFECTIVENESS ANALYSIS OF A CERVICAL CANCER VACCINE IN FIVE LATIN AMERICAN COUNTRIES

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**OBJECTIVES:** To assess the cost-effectiveness and cost-utility of adjuvanted HPV-16/18 vaccination at 12-years of age on top of the current cervical cancer (CC) screening program in five Latin American countries (Argentina, Brazil, Chile, Mexico, and Peru). **METHODS:** A one-year cycle Markov cohort model with a lifetime horizon from the health care payer perspective is calibrated with local epidemiology data. The model estimates the changes in pre-malignant lesions, CC cases, deaths, life years and QALYs saved due to vaccination of a single age-cohort. Efficacy parameter values for the base-case with sensitivity analysis are: vaccine efficacy for types HPV-16/18: 95% (95%CI: 87.4–98.7%); cross-protection against HPV-31 and HPV-45: 60% (95%CI: 20.5–80.7%) and 78% (95%CI: 39.3–93.4%) respectively. We discounted both long-term costs and benefits at 3%, and report in 2007 USD(\$). One-way sensitivity analysis is performed for achievable screening coverage, HPV-16/18 prevalence in cervical cancer, vaccine efficacy, age of vaccination (12–18 years), vaccine cross-protection or waning. **RESULTS:** HPV-16/18 vaccination is predicted to produce a considerable reduction on CIN II and III lesions [range: 62.8% (Brazil)—73.5% (Argentina)], CC cases [range: 62.7% (Brazil)—73.6% (Argentina)] and CC deaths [range per 100,000 vaccinated women: 235 (Chile)—761 (Peru)]. Life expectancy per vaccinated woman increases from 17 days (Chile) to 62 days (Peru) (undiscounted values). The ICER per QALY saved is \$5,964 in Argentina, \$10,181 in Brazil, \$17,666 in Chile, \$10,134 in Mexico and \$4,576 in Peru. All countries presented an ICER that is below the 3 GDP per capita thresholds. Results are most sensitive to the discount rate in all countries, and robust to all other parameters. **CONCLUSIONS:** Universal mass vaccination against HPV-16/18 is cost-effective in the current health care setting of each country, with a significant impact on the wellbeing of the population with a substantial number of cervical cancer cases and deaths avoided.

##### COST-EFFECTIVENESS OF SMOKING CESSATION INTERVENTIONS IN SEVEN LATIN AMERICAN COUNTRIES

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**OBJECTIVES:** To evaluate the cost-effectiveness of smoking cessation interventions (SCI) in seven Latin American countries. **METHODS:** The health economic model structure was defined after analyzing regional decision maker's information needs and the availability and quality of the required epidemiological data in the participating countries: Argentina, Bolivia, Brazil, Chile, Colombia, Mexico and Peru. A common methodology to retrieve local relevant information was convened and a first order Monte Carlo, or probabilistic microsimulation of individual patients was built, incorporating the natural history, costs and quality of life impact of all the tobacco-related diseases: coronary and non-coronary heart diseases, cerebrovascular disease, COPD, pneumonia/influenza, lung cancer as well as 9 other neoplasms. The public health perspective and standard discount rate were used. Interventions ranged from brief behavioural counselling to intensive pharmacological and cognitive behavioural therapy. **RESULTS:** An initial validation against the Argentinean population showed adequate internal validity, with all simulated events rates falling within  $\pm 10\%$  of the source publications. R2 between predicted and observed values ranged from 0.758 to 0.999. Third order validation showed an excellent correlation between published data and model results. Incremental Cost per QALY were calculated for different sets of interventions and target populations in each of the participant countries. Results in the cost effectiveness plane and acceptability curves were plotted. Cost per QALY showed great variability among treatments and countries. **CONCLUSIONS:** The results of the HEM will allow decision makers in the participating countries to tailor coverage policies for tobacco cessation interventions based on the cost-effectiveness evaluated for each setting.

##### UN MODELO DE COSTO-UTILIDAD DEL TRASPLANTE RENAL EN COLOMBIA

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**OBJETIVOS:** El incremento progresivo de la prevalencia de enfermedad renal terminal obliga a los tomadores de decisiones a buscar información de costo-utilidad de diálisis y trasplante. Este modelo de Markov simula el curso de vida de pacientes sometidos a hemodiálisis (HD) o a trasplante renal con cuatro posibles esquemas de inmunosupresión. **METODOLOGÍAS:** Se utilizaron las tablas de supervivencia de HD en Colombia y la información de la red internacional de trasplantes, que trae datos de complicaciones (incluyendo rechazo agudo y nefropatía crónica) para los esquemas de tacrolimus (TAC) (con mofetil micofenolato MMF o con azatioprina AZA) y de ciclosporina (CSA) (con MMF o AZA). La calidad de vida en QALY se obtuvo del registro de utilidades de la universidad de Tufts, y los costos fueron de facturación de grupos de trasplante de Colombia y de pagadores locales. La perspectiva empleada fue la de un tercero pagador, el horizonte temporal toda la vida del paciente, y la tasa de descuento 3% anual. Tasa de cambio: US\$1 = Col\$2391. **RESULTADOS:** La intervención menos costosa (US\$108K) es la HD, pero es también la que menos QALY proporciona (3.84, US\$28.1K/QALY). En orden ascendente de costos, los esquemas de inmunosupresión reportan: CSA AZA (US\$168K; 10.68 QALY; US\$15.8K/QALY); CSA MMF (US\$195K; 13.87 QALY; US\$14.1K/QALY); TAC AZA (US\$187K; 13.21 QALY; US\$4.1/QALY); TAC MMF (US\$214K; 14.85 QALY; US\$4.4K/QALY). Las razones incrementales de costo-utilidad para el trasplante fue en promedio de US\$8.9K por QALY adicional ganado, con respecto a la diálisis. **CONCLUSIONES:** Si se asume que la disponibilidad a pagar del sistema de salud es lo que cuesta la diálisis, cualquier esquema de inmunosupresión es más costo-útil que la diálisis. Se propone escoger, en este caso, el esquema que maximice la utilidad (TAC MMF).

##### THE COST AND HEALTH CONSEQUENCES OF SUBCUTANEOUS IMMUNOTHERAPY PLUS BECLOMETHASONE DIPROPIONATE IN COLOMBIAN CHILDREN WITH MODERATE AND SEVERE ASTHMA

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**OBJECTIVES:** To estimate the cost and clinical implications of using subcutaneous immunotherapy (SIT) plus beclomethasone dipropionate (BDP) for the treatment of moderate and severe asthma due to house dust mites in Colombian children versus the conventional therapy with BDP. **METHODS:** The disease course over 3 years of moderate and severe asthmatic children due to house dust mites ages 13 and 14 years and treated with BDP with or without SIT was modeled using discrete event simulation; 1000 pairs of identical patients were simulated 100 times. Population characteristics were obtained from a prevalence study in Colombia. Rates of asthma attacks were based on patient's Peak Expiratory Flow which varies according to patient's treatment. Physician visits, hospitalization and emergency room visit rates were extracted from published data. Only direct medical costs were considered; costs are reported in 2007 Colombian Pesos (COP) and inflated using the Consumer Price Index (CPI) where current costs were not available. Costs were discounted at a 3% rate. **RESULTS:** SIT plus BDP decreased the number of asthma attacks in 70% at a cost of COP 3,315,959 per patient. Frequencies of physician visits, hospitalizations and emergency room visits were predicted to occur less frequently for patients treated with SIT plus BDP than with BDP alone. Sensitivity analyses around the time horizon, 6 and 10 years, showed increasingly better results with SIT plus BDP over time. Sensitivity analyses around the discount rate for costs were also performed. **CONCLUSIONS:** SIT plus BDP is expected to improve outcomes and save costs compared to BDP alone. Thus, it will bring better health to Colombian children suffering from moderate-severe asthma at a savings to the Health Authorities.

#### PODIUM SESSION I: PATIENT-REPORTED OUTCOMES STUDIES

##### LITERATURE REVIEW AND PRODUCT LABEL CLAIM REVIEW OF PRO MEASURES FOR BENIGN PROSTATIC HYPERPLASIA

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**OBJECTIVES:** The objective of this research was to review the published literature to identify what patient-reported outcome (PRO) measures have been used in evaluation of BPH medications. **METHODS:** The literature review was carried out in two phases: Phase I focused on BPH-specific treatments and BPH-specific PRO measures while phase II expanded its scope to include other urinary conditions, non-disease-specific quality of life PRO measures and utility studies. Phase I included terms for BPH and terms for PRO measures. The 279 abstracts were narrowed by focusing on medical interventions and more widely read journals. The remaining 125 abstracts were reviewed. In Phase II, we expanded the search to include general quality of life (QOL) domains in the context of other urinary conditions and utility studies. The 273 abstracts identified were reviewed by 2 researchers to isolate the articles of interest, leaving 70 articles. **RESULTS:** We identified 64 articles from Phase I and 70 articles from Phase II. Among the Phase I articles, 52 reported using the International Prostate

Symptoms Score (IPSS). 44 articles which used the IPSS were able to detect a significant change in the symptom scores. The remaining articles used various other PRO measures for their BPH endpoints. Of the 70 articles yielded from the Phase II search, 11 were utility studies, 25 were BPH-specific articles, 29 were overactive bladder (OAB)-specific articles, and 5 were urge urinary incontinence (UUI)-specific articles. From the BPH, OAB, and UUI articles, we identified the key QOL instruments utilized to measure the various domains key to BPH. **CONCLUSIONS:** There have been a large number of PRO measures used in the literature to study BPH and related endpoints. It is clear that the IPSS has been used in the majority of the studies focused on BPH symptoms (81.25% of the ones reviewed).

PR2

#### IMPROVEMENT IN WORKPLACE AND HOUSEHOLD PRODUCTIVITY FOR PATIENTS WITH EARLY RHEUMATOID ARTHRITIS TREATED WITH ADALIMUMAB PLUS METHOTREXATE: WORK OUTCOMES AND THEIR CORRELATIONS WITH CLINICAL AND RADIOGRAPHIC MEASURES FROM A RANDOMIZED CONTROLLED TRIAL COMPANION STUDY

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**OBJECTIVES:** To evaluate work productivity of paid workers and homemakers with rheumatoid arthritis (RA) treated with adalimumab plus methotrexate (ADA+MTX), ADA monotherapy, or MTX monotherapy, and to determine baseline predictors of work outcomes. **METHODS:** Data were from the DE032 companion study to PREMIER, a 2-year, randomized controlled trial of MTX-naïve patients with early RA (<3 years). Absenteeism (number of missed work days), presenteeism (patients' self-judgment of effects of RA on work performance), and employment status data were collected from self-reports at baseline and varying timepoints during the 2-year study. For analyses of cumulative variables, adjustments were made for duration of patients' participation in DE032. **RESULTS:** Of 799 patients in PREMIER, 664 participated in DE032 (ADA+MTX, n = 219; ADA monotherapy, n = 231; MTX monotherapy, n = 214). Percentages of paid workers and homemakers were similar across treatment groups. Among paid workers, the number of missed work days at Year 2 was significantly fewer for ADA+MTX (17.4 days) and ADA monotherapy (18.7 days) vs. MTX monotherapy (36.9 days, p < 0.0001). Improvement in presenteeism was greater with ADA+MTX vs. MTX monotherapy (p < 0.05 at most visits). The percentage of patients who retained or gained employment over the 2-year study was 57.6% (121 of 210) for ADA+MTX, 51.8% (116 of 224) for ADA monotherapy, and 47.6% (100 of 210) for MTX monotherapy. The odds of retaining/gaining employment were significantly greater for ADA+MTX vs. MTX monotherapy (odds ratio [OR] = 1.53, 95% confidence interval [CI]: 1.04–2.26, p = 0.032). Retaining/gaining employment was significantly associated with younger age, female sex, and better baseline scores on the Health Assessment Questionnaire, Short Form 36 Health Survey, and radiographic progression (joint space narrowing, joint erosion, total Sharp score). **CONCLUSIONS:** ADA+MTX was associated with more positive work outcomes vs. MTX monotherapy. Productivity outcomes were similar for paid workers and homemakers. Radiographic progression at baseline was predictive of employment status.

PR3

#### EFFECT OF PREHOSPITALIZATION PERIOD AND TYPE OF PESTICIDES ON OUTCOMES IN ACUTE ORGANOPHOSPHORUS POISONING

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**OBJECTIVES:** To study the effect of prehospitalization period and type of pesticides on outcomes in acute organophosphorus poisoning. **METHODS:** A prospective study was conducted with organophosphate poisoning patients admitted to our emergency department between January 2007 and January 2008. Information regarding the age, sex, occupation, prehospitalization period, type of agent, route of poisoning, clinical, laboratory findings, type of management and subsequent outcome were recorded from the patient medical records. The outcomes were analyzed in terms of percentage of intermediate syndrome, requirement of ventilation, duration of hospitalization period, percentage of mortality, percentage of sequel and percentage of recovery. The outcomes were compared with prehospitalization period and type of pesticides. **RESULTS:** During the study period, 100 patients were admitted to the emergency ward with acute organophosphorus poisoning. The estimated mean prehospitalization period after the exposure was 2.5 ± 2.1 hours. There were 68 male and 32 female patients. The most affected age group was 21–30 years (60%). Oral ingestion (99%) was found to be the most common route of poisoning. The most frequent reason for poisoning was attempted suicide (98%). The most common organophosphate compounds exposed were type Ia which was extremely hazardous (60%) and type II which was moderately hazardous (25%). Comparing the outcomes with the mean prehospitalization period showed that it did not significantly affect outcomes in acute OP poisoning, but the incidence of intermediate syndrome was higher in these patients. There was significant correlation between type of compound and outcome. The incidence of intermediate syndrome, requirement for ventilation and rate of mortality was significantly higher in type Ia compounds when compared to other type of pesticides. **CONCLUSIONS:** The prehospitalization period had no influence on outcomes in acute OP poisoning, where as type of OP compounds significantly effect incidence of intermediate syndrome, requirement for ventilation and rate of mortality.

#### QUALITY OF LIFE IN PATIENTS WITH EPIDERMOLYSIS BULLOSA

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Epidermolysis bullosa (EB) is a rare, inherited group of disorders characterized by blistering of the skin following friction or mechanical trauma. EB has a clinical and socio-economic impact on patients and their families. **OBJECTIVES:** To assess the Quality of Life (QoL) in patients with EB and to determine disease burden. **METHODS:** The study was an observational, cross-sectional postal survey. 185 patients were invited to participate. Different sets of questionnaires (SF-36, Skindex-29, GHQ-12, EQ-5D) were sent to patients according to age. The perceived severity of the disease was evaluated by patients or by the mothers of the younger EB children, using the Patient Global Assessment 5-point scale. Caregivers received the Family Strain Questionnaire (FSQ). **RESULTS:** A total of 125 respondents were analysed. EB patients showed lower values in physical components of SF-36, while the mental ones were not significantly impaired. Among EB types, junctional EB and severe generalized recessive dystrophic EB patients reported lower values and their General Health scale was significantly different from EB simplex. There were no significant differences among EB types/subtypes for Skindex-29 values. Females had a worse QoL compared to males in each Skindex-29 and SF-36 scales (p < 0.05). GHQpositive cases were 48% among females, 16% among males (p = 0.003); GHQpositive cases had a worse QoL compared to GHQnegative. The patient QoL and the family burden increased with increasing patient's perceived disease severity and with increasing patient's body surface involved. No differences were seen among EB types for the family burden. **CONCLUSIONS:** In EB patients mental components of SF-36 scores are similar to the normal population. The perceived disease severity and skin area involved are relevant for QoL independently by EB type/subtype. EB imposes a heavy burden on the caregiver and the family. Psychological support and close monitoring of QoL may help EB patients and their caregivers.

#### PODIUM SESSION I: RESEARCH ON METHODS: I

MC1

#### VALORACIÓN SOCIAL DE LOS ESTADOS DE SALUD EQ-5D EN CHILE: ALCANCES METODOLÓGICOS

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**OBJECTIVOS:** Obtener la valoración social de los estados de salud de EQ-5D en una muestra representativa de la población de Chile y determinar con ello, el índice social EQ-5D de la totalidad de estados de salud de EQ-5D (243). **METODOLOGÍAS:** Se entrevistaron a 2000 personas de 20 años y más, residentes de la Región Metropolitana de Chile, a las que se les aplicó el cuestionario EQ-5D/VAS, recogiendo además datos sobre variables sociodemográficas relevantes. Luego, se evaluaron 42 estados de salud mediante los métodos VAS, ranking y equivalencia temporal (TTO). Los 42 estados de salud utilizados corresponden a los mismos utilizados en el estudio Measurement and Valuation of Health (MVH) del Reino Unido en 1993. **RESULTADOS:** Se obtuvo la valoración para los 42 estados de salud, con las diferentes metodologías señaladas. Las tasas de respuesta y niveles de consistencia fueron similares a los observados en estudios de países desarrollados. Se observó una dificultad decreciente en la aplicación de las metodologías VAS, ranking y TTO. Los resultados obtenidos mediante las tres técnicas se encuentran muy correlacionados entre sí. **CONCLUSIONES:** La colaboración de la población encuestada y el compromiso del equipo de encuestadores, al ceñirse estrictamente a la metodología del estudio, respaldan la validez y confiabilidad de la información recopilada. Un trabajo de campo con énfasis en capacitación y control constante del proceso de recopilación de datos, permite reducir la tasa de no respuesta a niveles de países desarrollados. La aplicación secuencial de las tres metodologías permite obtener muy buenos resultados tanto en consistencia interna como en sus correlaciones.

MC2

#### SELF-PERCEPTION OF HEALTH IN LATIN AMERICA

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**OBJECTIVES:** The capacity for planning and implementing public health policies requires knowledge and understanding of population's health status. Information traditionally collected in population surveys is related to physical and biological measurements; however, the self-perception of health has recently gained importance. This has occurred in light of the widespread phenomenon of an aging population and increased prevalence of chronic diseases and disabilities at international level. The study compared the self-perception of health-related quality of life (HrQoL) of six Latin American countries and its relationship with socio-demographic variables. **METHODS:** This study was based on secondary data collected for World Health Survey 2005. Participating countries in the region were Brazil, Paraguay, Uruguay, Mexico, Dominican Republic and Ecuador. A probabilistic sample was collected for each country, with sex and age national representation (n = 67,734). The study outcome was HrQoL classified in 5 categories (Very Good, Good, Moderate, Bad, Very Bad). Analyses to estimate the existence of real differences on overall HrQoL between countries were performed through binary and ordinal logistic regressions. Results were adjusted by sex, age and educational level. **RESULTS:** The two countries