OBJECTIVES: The objective of this study is to present a method to support decisions during HTA process. The method suggests a conjugation of social, cultural, economical, ethical, epidemiological, technical and clinical factors, through the stakeholders' points of view. The advent of clinical scenarios allows the use of multiple factors that impact clinical outcome, under the reliability of situations that mimic real world dilemmas. We agreed to call this model by Decision Making Clinical Scenarios (DMCS). **METHODS:** This model of research is based in a cross exploratory research, through a DMCS questionnaire involving HTA dilemmas. The scenarios introduce value judgments, preferences and structuring choices, under specific circunstances. The scenarios are based in trade-offs that are related to health technology assessment, such as budget impact, sources of funding, eligibility of patients, technology charactheristics and disease epidemiology. The DMCS are applied to HTA stakeholders. Payers, sellers, prescribers, developers, reseachers, regulators, patients, government and society opinions can be analised and considered. **RESULTS:** The scenarios have been shown understandable for all groups. When testing the model with hippotetical dillemas through clinical scenarios, the results were strongly influenced by each presented trade-off. Althought, we can observe specific trends when analising groups separately, and it is clear different motivations in their choices. The results are always evaluated and validated through statistical analysis. **CONCLUSIONS:** The presented trade-offs clearly influenced the results. We concluded that most stakeholders are not guided only by clinical benefit of a decision. This study model seems to be useful to evaluate the trends of decision makers conduct, in many areas. We understand that the use of clinical scenarios brings the discussion into the enviroment of HTA process, where outcome impacts can be analyzed properly. This model can be used in further researches, using flexible criteria for each scenario, through real world situations. It can be a model to guide strategies, including budget allocation, public health care policies, and patient shared decision making.

RM2

LACK OF STANDARDIZED METHODS FOR HANDLING MULTIPLES SOURCES FOR MODEL PARAMETERS: A SYSTEMATIC REVIEW

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OBJECTIVES: Guidelines for cost-effectiveness models (CEM) usually recommend performing systematic review and meta-analysis for the treatment effectiveness estimate. However, CEM are populated with many other parameters, and guidelines do not usually provide guidance regarding how the review should be conducted. There is also no consensus for the optimal approach when multiple parameter sources (MPS) are encountered, particularly regarding pooling of results. We reviewed three health economics journals (MDM, Value in Health and Pharmacoeconomics) to evaluate MPS usage frequency and how these data were handled. **METHODS:** Systematic review of published CEM from 2013-2014 by pairs of two independent reviewers. We evaluated MPS frequency, summarization and use in sensitivity analysis. **RESULTS:** 69 articles were included. Most common areas were oncology (25%), infectology (12%) and cardiology (10%). In 61% of the articles, it was clear that MPS were used for model parameters aside the treatment effectiveness, in most cases for estimating probabilities (95%), and less often for utilities (40%) and costs (24%). In only 29% of the studies a formal systematic review was used. In studies with MPS, only 45% indicated some form of pooling; among such studies, methods for pooling was unclearly described in 53%. Only six articles used the term "meta-analysis", and only four clearly stated that a single-group meta-analysis was undertaken. Regarding sensitivity analysis, in 52% of the studies the MPS found were apparently not used. MPS were clearly used in 12 studies (either highest/lowest values from the literature, or simply a second analysis with a different source/estimate), and in an unclear fashion in five studies. In only three studies the 95% CI of single-group meta-analysis was used. **CONCLUSIONS:** We found that many CEM use MPS for populating their models, but proper methods for pooling values using meta-analysis are rarely used, and even more rarely properly reported, especially when single-group meta-analysis would be required.

RM3

COST-EFFECTIVENESS THRESHOLDS: REVIEW OF CASES AROUND THE WORLD

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OBJECTIVES: This study aims to review the position of some countries in relation to the cost-effectiveness threshold. **METHODS:** An electronic search on Medline, Lilacs and ScienceDirect was conducted and complemented by references of included studies, Google Scholar and conference abstracts. **RESULTS:** In most places evaluated, an explicit cost-effectiveness threshold has never been formally adopted, but an implicit one could be determined by research in some countries. WHO-Choice suggested, in 2005, that therapeutic alternatives that add less than three times the GDP per capita/DALY should be considered cost-effective. There is a resilience of benchmark values of 50,000 to 100,000 USD/QALY in USA-based studies. In the UK, NICE adopts thresholds of 20,000 to 30,000 GBP/QALY, which could be extended to 50,000 GBP/QALY for end-of-life care. In Canada, CADTH has no explicit threshold value for cost-effectiveness studies, but the benchmark value of 50,000 CAD/QALY is often cited in studies. In Thailand, the commissioners of health technology assessment recommended that the threshold should not be higher than 1.2 Gross National Income per capita/QALY. In Poland, a general threshold of three GPD per capita/QALY or LYG was legally established in 2012. Ireland legally established a 45,000 EUR/QALY threshold for HTA of pharmaceuticals in 2012. Germany established a variable threshold based on an efficiency frontier curve. **CONCLUSIONS:** For most countries evaluated, it can be showed that the threshold value set is under WHO-Choice's recommended threshold. With that in mind, the use of the WHO-Choice threshold to issue recommendations on cost-effectiveness studies might justify the requisition of higher prices for the pharmaceutical companies in health technology assessment studies, recommend inefficient technologies for funding and lead to increasing health spending.

RM4

DETERMINING THE BRAZILIAN POPULATION HEALTH STATUS: ESTIMATE OF HEALTH PRODUCTION FUNCTION

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OBJECTIVES: Estimate health production functions for Brazil based on Grossman's theoretical model. **METHODS:** Descriptive and analytical research with 12,748 observations developed with the information about Pesquisa Nacional de Saúde (PNS) of 2013. The empirical approach used was the Probit, focusing on the estimation of two models: The first investigating factors that affect the health of the Brazilian population, And the second, an extension of this analysis, restricted to chronic diabetes disease. **RESULTS:** The ages declared by survey participants range from 18 to 95. Considering the first model, the increase in the educational level, rises in 11.6% the probability of the individual evaluating himself with very good or good health. The gender variable, in turn, indicates that women reported lower health status (the probability of being evaluated with better health declaring the female sex is 5,1% lower). The probability of self-assessment with better health is 3.1% lower when the individual is 60 years of age or older. In addition, obesity decreases the chances of positive self-assessment of health by 2%. These variables were also important to explain the prevalence of diabetes in the second model. Higher level of schooling, not being old and not being obese are associated with less probability of the person being diagnosed with diabetes (reduce, by 0.5%, 4.8% and 1.4%, respectively, this probability). It is noted that sex was not significant to explain the prevalence of this disease. Finally, have healthy eating habits and practicing exercises are associated with better health and less likely to have been diagnosed with diabetes. **CONCLUSIONS:** It is observed that educational policies and actions that stimulate healthy habits and focused in the elderly health are important for improving the health status of the population and the living conditions of those who are or will pass through the aging process.

BREAKOUT SESSION

P7: HEALTH SERVICES RESEARCH STUDIES

HS1

CARACTERIZACIÓN DEL RIESGO CARDIOVASCULAR POR FACTORES ASOCIADOS: ANÁLISIS DE BASE DE DATOS DE UNA ASEGURADORA COLOMBIANA

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OBJECTIVES: Determinar la presentación de eventos cardiovasculares en la población afiliada a una entidad promotora de salud en Colombia y su posible relación con factores de riesgo previos. **METHODS:** Se realizó un análisis de los registros de prestación de servicios de salud provenientes de un poco más de 3.000.000 pacientes atendidos dentro del sistema de seguro de salud obligatorio (contributivo) colombiano durante el año 2014. Se identificaron los diagnósticos asociados a eventos cardiovasculares, aneurisma aórtico abdominal, angina inestable, enfermedad valvular, enfermedad vascular periférica, falla cardíaca, hipertrofia ventricular izquierda, infarto agudo de miocardio, isquemia cerebral transitoria, enfermedad cardiovascular no especificada, mediante código CIE-10, se desarrolló una búsqueda retrospectiva de los diagnósticos previos de los pacientes con eventos pero durante el año 2013 con el fin de encontrar la relación con factores de riesgo metabólicos diabetes, hipertensión e hipercolesterolemia. **RESULTS:** Se identificaron 7509 pacientes con algún evento cardiovascular, siendo el de mayor frecuencia el IAM con 23,41 %; seguido de la falla cardíaca 21,35 % y la angina inestable 18,86 % conformando más del 50 % de los eventos. El análisis retrospectivo mostró que el 32,7 % de la población con evento no presentaba diagnóstico previo de riesgo relacionado con la enfermedad cardiovascular. Mientras que el 67,3 % de los pacientes tuvo un diagnóstico relacionado con un factor de riesgo durante el año anterior al evento; el diagnóstico más frecuente fue el de hipertensión, que se presentó en el 75,3 %; la hipercolesterolemia se presentó en el 17,7 % de la población y la diabetes en el 7,0 %. **CONCLUSIONS:** Los datos permiten mencionar que factores de riesgo como la hipertensión, la hipercolesterolemia y la diabetes son indicadores relevantes para evaluar la posible presentación de eventos cardiovasculares, las entidades promotoras de salud deberían desarrollar programas de seguimiento a pacientes para minimizar la presentación de eventos cardiovasculares.

HS2

RESULTADOS DE LA IMPLEMENTACIÓN DE UNA ESTRATEGIA COMBINADA DE EDUCACIÓN Y GESTIÓN DE PACIENTES EN CENTROS DE ATENCIÓN PRIMARIA DE ARGENTINA

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OBJECTIVES: Evaluar el impacto de un programa de capacitación de médicos y enfermeras, asociado a cambios en el sistema de gestión de pacientes y registro sistemático de variables clínico-metabólicas y terapéuticas, implementado en el nivel primario de atención, sobre la calidad de atención brindada a personas con diabetes tipo 2 (DT2). **METHODS:** Seleccionamos aleatoriamente 15 duplas (médico-enfermera) de 15 centros de atención primaria (CAPs) de La Matanza (grupo intervención-GI) y otros 15 médicos/enfermeras de igual número de CAPs (grupo control-GC). Cada dupla controló/siguió a 10 personas con DT2 durante 12 meses. Los pacientes en el GC recibieron atención médica tradicional, mientras que en el GI se implementó educación (capacitación de médicos y enfermeras), cambios en el sistema de gestión de pacientes (uso de guías, controles programados [4/año] y

recordatorios [call center] e interconsulta anual programada con Oftalmólogo y Cardiólogo). Complementariamente relevamos características fundacionales de estructura y procesos de gestión, del CAP y la red sanitaria. El análisis incluyó estadística descriptiva (media±desvío estándar o proporciones) e inferencial. Para las comparaciones se utilizaron pruebas paramétricas y no paramétricas considerando significativos p<0,05. **RESULTS:** Inicialmente no registramos diferencias significativas entre el GI (n=154) y GC (n=157). La deserción en el seguimiento fue significativamente mayor en el GC (48% vs. 28%; p=0.000). Finalizado el estudio (final vs. basal), el GI mostró descensos significativos en: HbA1c (7,18±1,4 vs. 7,65±2,1), presión arterial diastólica (77,8±9,4 vs. 80,7±10,8), glucemia (143,1±51 vs. 161±70), Colesterol total (182±36 vs. 196,9±46,3), c-LDL (107,8±30,9 vs. 117±38,1) y Triglicéridos (175,5±99 vs. 201,2±141). No registramos cambios significativos en el GC. Los cambios de mayor magnitud, correspondieron a las CAPs con peores características fundacionales. **CONCLUSIONS:** Estos resultados demuestran que la combinación de educación y cambios en el sistema de control/gestión de pacientes, mejora efectivamente la calidad de atención brindada a personas con DT2 y FRCV asociados.

HS3

ECONOMIC BURDEN OF HERPES ZOSTER ("CULEBRILLA") IN LATIN AMERICA

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OBJECTIVES: Evaluate the healthcare resource utilization (HCRU) and costs associated with herpes zoster (HZ) and postherpetic neuralgia (PHN) in Latin America. **METHODS:** We conducted a pooled-analysis of three prospective cohort studies of HZ patients ≥50 years of age in Argentina (n=96); Brazil (n=145) and Mexico (n=142). Patients were recruited during their HZ episode and were followed for six months. Incidence of PHN was defined as a worst ZBPI pain score of ≥3, persisting/appearing more than 90 days after rash onset. Work effectiveness was measured on a 100-point Likert scale where 100 was described as completely effective and 0 as not effective at all. Direct costs included costs from antiviral medication use and all medical services used to treat HZ. Indirect cost was based on forgone earnings from patients due to work loss and presenteeism, and work loss by family caretakers. All costs are reported in 2015 USD currency. **RESULTS:** 383 HZ patients were included and PHN incidence was 38.6%. The most commonly used resources were visits to the doctor's office (79.1% of patients), the emergency room (48.8%) and a specialist (37.9%). The overall direct cost per case was $763.19 USD, indirect cost was $701.40, for a total of $1,464.59 per HZ episode in Latin America. Total cost associated with HZ in patients with PHN was markedly higher compared to patients without PHN ($2,001.13 vs. $867.72, respectively) with indirect costs accounting for the most part of this difference. **CONCLUSIONS:** HZ and its sequelae impose a substantial economic burden in Latin America, which is expected to rise as the population ages and the number of HZ cases increases. The results support the need for preventative strategies and improved disease management to reduce the HZ-associated disease burden in Latin America.

HS4

FINANCIAMIENTO DE ENFERMEDADES HUÉRFANAS Y RARAS EN LATINOAMÉRICA

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Las enfermedades raras y huérfanas vienen siendo priorizadas por las políticas de países de Sudamérica desde hace más 10 años. A continuación, se elaboró una revisión comparativa de cuatro países de Sudamérica: Perú, Colombia, Chile y Brasil y los avances hacia la inclusión en sus planes de beneficios de salud la cobertura de enfermedades raras y huérfanas y los mecanismos de financiamiento de las mismas. Se realizó una revisión de la legislación en enfermedades huérfanas y raras en los cuatro países, evaluando los siguientes criterios: definición, políticas, mecanismos de financiamiento y acceso al diagnóstico y tratamiento. Dentro de las políticas en salud para, los cuatro países proponen un registro de pacientes con enfermedades huérfanas, es así Colombia hace un estimado de la población con enfermedades raras calculada en 13238, del resto de países no se conocen los datos precisos. Por otro lado, otra coincidencia es el listado de enfermedades huérfanas a atender, de cantidad variable de país a país, Perú con 399, Colombia con 1920. Otras estrategias particulares de cada país, son requisitos para la cobertura de una enfermedad rara como es el caso Chileno, especificados en la Ley Ricardi Soto del 2015. En Brasil, se viene implementando el tamizaje neonatal desde el 2001 de enfermedades raras y desde el 2009 una política nacional de atención integral de genética clínica. Respecto al financiamiento, Colombia, Perú y Brasil lo reciben como fracción del presupuesto asignado a sus respectivos sectores; Chile tiene un fondo autónomo con capacidad de generar rentabilidad. En general, muchos países han implementado una combinación de legislaciones, reglamentos y políticas para enfermedades huérfanos en las últimas dos décadas. Si bien éstos pueden permitir atención de Enfermedades raras y huérfanas, existen diferencias críticas entre los países en términos de alcance y tipos de legislaciones, reglamentos y políticas aplicadas.

P8: PRICING AND POLICY STUDIES

PR1

CONSULTA PÚBLICA COMO INSTRUMENTO DE DIÁLOGO E NEGOCIAÇÃO ENTRE INDÚSTRIA E GOVERNO

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OBJETIVOS: Identificar as tecnologias em saúde incorporadas ao SUS após a Comissão Nacional de Incorporação de Tecnologias no SUS (CONITEC) rever as recomendações iniciais contrárias à incorporação em decorrência de novas propostas de preço apresentadas pela indústria durante as consultas públicas. **MÉTODOS:** Estudo descritivo, de corte transversal. Foram levantadas, de janeiro de 2012 a março de 2017, todas as tecnologias incorporadas no SUS que haviam tido recomendação preliminar contrária à incorporação e que, após a consulta pública, a recomendação passou a ser favorável. Dessas, contabilizou-se quantas receberam novos estudos econômicos ou propostas de preço por parte da indústria produtora da tecnologia. **RESULTADOS:** Foram encontrados dez casos de mudança de recomendação após consulta pública. Desses, quatro (40%) receberam, entre outros subsídios e contribuições, novos estudos econômicos (impacto orçamentário e custo-minimização) ou propostas de preço por parte das empresas produtoras das tecnologias, fatores importantes para a mudança da recomendação, a saber: tofacitinibe para o tratamento de pacientes adultos com artrite reumatoide (2017), teriflunomida para primeira linha de tratamento da esclerose múltipla remitente recorrente (2017), rivastigmina via transdérmica (adesivo) para o tratamento de pacientes com demência leve e moderadamente grave do tipo Alzheimer (2016) e abatacepte subcutâneo para o tratamento da artrite reumatoide (2015). **CONCLUSÕES:** Durante as consultas públicas das demandas de incorporação de tecnologias em saúde no SUS, além de informações técnico-científicas, relatos de experiência e opinião sobre cada tema analisado, a CONITEC tem recebido novas propostas de preço e estudos econômicos da indústria, permitindo, em alguns casos, que essas tecnologias passem a ser competitivas e possam ser incluídas como alternativas em relação àquelas já disponíveis no SUS. Nesse sentido, para além de um importante mecanismo de participação social, as consultas públicas realizadas pela comissão podem ser vistas como instrumento de diálogo e negociação entre produtores de tecnologias em saúde e governo.

PR2

THE EFFICIENCY PATH TO UNIVERSAL HEALTH COVERAGE: DERIVATION OF COST-EFFECTIVENESS THRESHOLDS BASED ON HEALTH EXPENDITURES AND LIFE EXPECTANCY. UPDATED COUNTRY-LEVEL ESTIMATES FOR 194 COUNTRIES

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OBJECTIVES: To use a previously derived methodology to estimate cost-effectiveness thresholds (CETs) based on per capita health expenditures (pcHE) and life expectancy at birth (LE), and update empirically derived CETs for 194 countries. **METHODS:** We developed a conceptual framework to assess how the selection of a particular CET will affect the rate of increase of pcHE. When the cumulative effect of the new interventions has added one year of life to population LE, the pcHE will have increased at a ratio ("i") which can be quantified as: i=1+CET/pcHE*(LE+1), assuming that the mean cost-effectiveness of new interventions is equal to CET. This allows the definition of CETs based on a target increase in expenditures. The expected rate of increase in pcHE, according to countries' LE and income level, was estimated using WorldBank data to empirically derive the country-level indicative CETs that new interventions should not exceed in order to keep the increase in expenditures at the expected rate. **RESULTS:** The expected increase in pcHE was between 7.8% and 10.5% (low and high-income countries respectively) for each one-year increase in LE (an achievement that countries typically attain in 4-6 years). In order not to promote increases beyond this trend, CETs should be in a range between 5-8 pcHE per life-year and 7-11 pcHE per QALY/DALY. In 91.6% of the countries the estimated CETs were below one GDP per capita per life-year and in 80.0% were below one GDP per QALY/DALY. In none, CETs were above two GPD per capita. CETs per life-year ranged between 0.53-0.90, 0.45-0.71, 0.37-0.62 and 0.36-0.50 GDP in Brazil, Mexico, Peru and Bolivia respectively (0.62-1.05, 0.52-0.83, 0.43-0.72 and 0.42-0.58 per QALY). **CONCLUSIONS:** Our results show lower CETs than those promoted in the past by the WHO, and suggest that the adoption of higher thresholds would drive increases in pcHE beyond the current trend.

PR3

LIMITACIONES DE LAS EVALUACIONES ECONÓMICAS EN SALUD EN LA ASIGNACIÓN DE RECURSOS PARA MEDICAMENTOS PARA ENFERMEDADES RARAS: UN SCOPING REVIEW

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A la fecha, la mayoría de los países de la OCDE han incorporado cursos de acción para mejorar el acceso a Medicamentos para Enfermedades Raras (MER). No obstante, los Procesos de Decisión de Cobertura de Medicamentos (PDC-M) que emplean metodologías de Evaluación Económica en Salud (EES), aún representan un factor determinante. **OBJECTIVES:** Se llevó a cabo una revisión de literatura tipo scoping review para identificar las limitaciones de las EES en la asignación de recursos para MER. **METHODS:** La revisión consideró distintas bases de datos (MEDLINE, Embase, CINAHL, LILACS, Web of Science, EconLit), en las que se ingresaron las sinonimias identificadas por el Grupo de Interés de ER de ISPOR de la palabra clave "MER". Adicionalmente, se compararon los PDC-M y de MER puntualmente en los países de la OCDE con procesos de ETESA formales a nivel nacional. Para esto, se utilizaron los sitios web de autoridades sanitarias identificadas en el directorio ISPOR, y el navegador de google para explorarlos. **RESULTS:** Se identificó un total de 19 artículos relevantes, referidos principalmente a; la falta de representación de los elementos de valor relevantes en la evaluación de MER; la inconsistencia que se produce en el plano internacional entre las políticas de MER (con los incentivos correspondientes) y los PDC que restringen el acceso, basándose en lo discreto de los beneficios que estos importarían en términos de AVAC ganados, y; la elevada incertidumbre de los resultados de las EES de MER, por la calidad de la evidencia característica de estudios en poblaciones con ER. **CONCLUSIONS:** Se requiere avanzar progresivamente hacia