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**OBJECTIVES:** determinar el índice beneficio-riesgo para líquidos dializantes (LD) en pacientes en hemodiálisis en Perú. **METHODS:** desarrollamos un análisis multicriterio en base a los beneficios y riesgos de dos LD: con buffer citrato (LD-C) y con buffer acetato (LD-A). Los beneficios del modelo incluyeron: relación Kt/V, trombo-genicidad, pH sanguíneo, marcadores de inflamación y estrés oxidativo, productos finales de glicación avanzada y niveles séricos de calcio, fósforo, aluminio y beta 2-microglobulina. Hipotensión clínica, otros efectos adversos y costos fueron considerados como riesgos. Calculamos los pesos normalizados para cada intervención y resultado (ya sea riesgo o beneficio) y los expresamos como pesos acumulados. Las puntuaciones ponderadas y sus sumas se calcularon (puntuación de preferencia global) para cada opción. Consideramos que una intervención tenía una puntuación global preferencial cuando la suma total de los pesos normalizados de riesgos y beneficios era mayor que el control. Realizamos un análisis de sensibilidad univariable para estimar la robustez del modelo. Los costos médicos directos en Soles al año 2016 fueron determinados según dos niveles de atención y correspondieron a la seguridad social. **RESULTS:** los valores ponderados otorgados a ambas tecnologías de acuerdo a sus beneficios fueron 44 y 55 para LD-A y LD-C, respectivamente, y los valores para los riesgos fueron en ambos casos 70; dando un valor total preferido de 57 para LD-A y 62 para LD-C. La mayor diferencia en el valor preferido total se relacionó con el nivel de suero de aluminio (4 puntos a favor del LD-C). Otros criterios tenían diferencias entre 0 y 0,6. En el análisis de sensibilidad se observó que habría que subestimar significativamente los beneficios para invertir el resultado obtenido. **CONCLUSIONS:** considerando un peso similar para los beneficios y riesgos el uso de LD-C muestra un mejor perfil beneficio-riesgo que el LD-A. Los resultados son robustos de acuerdo al análisis de sensibilidad.

#### MEDICAL DEVICE/DIAGNOSTICS – Patient-Reported Outcomes & Patient Preference Studies

##### PMD33

#### A DISCRETE CHOICE EXPERIMENT TO ELICIT DIABETES TREATMENT PREFERENCES AMONG ADOLESCENTS WITH TYPE 1 IN WESTERN AUSTRALIA

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**OBJECTIVES:** This project aims to identify the aspects of glucose monitoring systems important to adolescent patients with type 1 diabetes and quantify the relative importance of treatment attributes to inform policy-makers in health technology assessment. Patients can choose their glucose-monitoring system from a number of alternatives— however, adolescent patients do not make payment decisions. Significant out-of-pocket costs for new glucose-monitoring technologies in Australia may restrict access based on ability-to-pay. Subsidisation of continuous glucose monitoring (CGM) is currently on the political agenda. Given lifestyle and developmental changes during adolescence, it is essential that diabetes management systems suitably match lifestyle requirements to improve clinical compliance and long-term health outcomes. Failure to consider patient preferences and non-health benefits in economic analysis may therefore underestimate the cost-effectiveness of technologies over-lifetime. **METHODS:** Three focus groups were hosted to identify important aspects of diabetes treatments for adolescent patients and their parents. A Discrete Choice Experiment was designed using NGene software and was electronically distributed to 179 eligible patients from the 13-15 year old population with type 1 diabetes in Western Australia and their parents. Treatment preference and willingness-to-pay data was collected from 119 parents and 90 adolescent-parent dyads. **RESULTS:** Adolescent treatment decisions are negatively influenced by the number of fingerpricks required to monitor blood-glucose per day. Adolescents have a strong preference for treatments that are continuously attached, have low times required to obtain a blood-glucose value and offer alarms for hypoglycaemia and hyperglycaemia compared to the baseline (standard glucometers), reflective of continuous glucose monitoring or flash glucose monitoring systems. Parent data demonstrate that the number of fingerpricks is most influential in treatment decisions, with strong preference for treatments that offer alarms. **CONCLUSIONS:** Policy-makers should consider co-payments as an alternative to full subsidisation for CGM technologies.

##### PMD34

#### CAMBIOS EN LA CALIDAD DE VIDA RELACIONADA CON LA SALUD DE PACIENTES SOMETIDOS A PREPARACIÓN INTESTINAL

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**OBJECTIVES:** Evaluar los cambios en la calidad de vida y la efectividad en pacientes tratados con diferentes métodos de limpieza intestinal oral como preparación para colon por enema. **METHODS:** Se realizó un estudio analítico no intervencionista observacional de cohorte prospectiva con asignación aleatoria a 3 grupos diferentes de preparaciones (fosfatos oral con 24 horas de ayuno, fosfatos oral modificado con 12 horas de ayuno y Polietilenglicol con electrolitos), las variaciones en calidad de vida fueron estimadas mediante el uso de un instrumento general el EQ5D-3L tomado dentro de una encuesta posterior a la preparación y en estado basal de pacientes adultos sin riesgo cardiovascular. Se utilizó la valoración del radiólogo para la evaluación de efectividad de la preparación para el procedimiento de colon por enema. **RESULTS:** Se reclutaron 547 pacientes. Entre el 46 y 55% de los pacientes reportaron disminución de su calidad de vida. Al valorar la pérdida de calidad de vida con EQ5D-3L en los pacientes que la reportaron el porcentaje de desutilidad fue de 1,5%, 1,8% y 2,6% en los pacientes que recibieron fosfatos oral modificado con 12 horas de ayuno, fosfatos oral con 24 horas de ayuno y polietilenglicol con electrolitos,

respectivamente. Al analizar por dimensiones, la asociada a dolor fue modificada significativamente entre los grupos. Las diferencias por sexo mostraron que los hombres presentan una desutilidad significativamente mayor que las mujeres con la preparación con Polietilenglicol con electrolitos de 5,1%. La calidad de la preparación fue similar y adecuada para las tres preparaciones analizadas. **CONCLUSIONS:** Los pacientes que son sometidos a preparación intestinal ven afectados su calidad de vida con cualquiera de los tres tipos de preparaciones, sin embargo, la preparación con fosfatos oral modificado con 12 horas de ayuno es la que menos afecta la calidad de vida con efectividad similar a las otros esquemas de preparación.

#### MEDICAL DEVICE/DIAGNOSTICS – Health Care Use & Policy Studies

##### PMD35

#### SPIROMETRY OF LUNG FUNCTION EVALUATION IN STONE CRUSHING WORKERS QUETTA, PAKISTAN

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**OBJECTIVES:** The study was planned to evaluate the influence of silicon dust on lung function between stone crushing workers and general population. **METHODS:** The one hundred and six male study respondents age of 20 years and above were considered, out of which 53 were from stone crushing workers and 53 were from general population randomly selected from Quetta district, Pakistan. Respondents were divided into two groups; group-I (stone crushing workers) and group-II (general population). Data was collected by self-designed performa and Spirometer. The forced vital capacity (FVC), forced expiratory volume in one second (FEV1), peak expiratory flow rate (PEFR), ratio of FEV1 and FVC (FEV1/FCV %) and forced mid expiratory flow (FEF25-75%) were calculated and explored. The frequency, percentage and descriptive statistical measurements were observed for both groups by using SPSS 22. Friedman's two-way analysis of variance by rank (1) test was applied and Sig level (P<0.05) was observed. **RESULTS:** The mean value of FVC in stone crushing workers was (61.3%) and mean value of FVC in control group was (69.2%). The FEV1 mean value for the stone crushing workers was (70.0%) and in control group the mean value was (77.4 %). The mean value for PEFR was (77.2%) in stone crushing workers but the mean value for PEFR in control group was (86.1%). The mean value for FEV1/FVC ratio was (114.5%) in stone crushing workers and in control group mean values was (112.2%). The mean value for FEF25-75% was (104.6% in stone crushing workers and the mean value for FEF25-75% in control group was (108.5%). **CONCLUSIONS:** This study was concluded that no significant difference found between silicon dusts exposed group and non-exposed group, both the groups showed the slightly restrictive lung defects but the non-exposed group was bit better than the silicon exposed group.

##### PMD36

#### OUTCOMES IN CONTACT FORCE TECHNOLOGY USE FOR CARDIAC ABLATION – ROLE OF PROCEDURE VOLUME

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**OBJECTIVES:** To examine the effect of hospital volume of ThermoCool SmartTouch® Catheter use on outcomes among patients with atrial fibrillation (AF) undergoing ablation using this device. **METHODS:** A retrospective cohort design using a United States (US) hospital billing database representing 20% of all hospital discharges was used. Patients ≥18 years of age with a primary diagnosis of AF undergoing ablation treatment using the ThermoCool SmartTouch® Catheter during the period January 2014-June 2016 were identified, with the first date of procedure being index date. Hospital volume of ThermoCool SmartTouch® Catheter was determined in the 12-month pre-index period. Hospitals were classified into five volume groups: no volume (0), low volume (1-50), mid volume (51-100), high volume (101-150), very high volume (≥151). Outcomes including length of stay (LOS), costs (total, pharmacy, supply), and all-cause readmission were studied. Generalized estimating equation was used to examine the volume-LOS and volume-cost relationship, and logistic regression for volume-readmission relationship. Models were adjusted for hospital clustering, and other covariates. **RESULTS:** The final sample included 640 patients. Higher volume was associated with shorter LOS, with LOS being shorter in high (2.85vs.4.84;p<0.05) and very high (2.32vs.4.84;p<0.01) volume hospitals than hospitals with no volume. As volume increased, supply cost decreased, with costs being lower in high volume hospitals than hospitals with no volume (\$8,051vs.\$9,939;p<0.05). Increasing volume was also associated with lower all-cause readmission, with the 12-month all-cause readmission being significantly lower among patients undergoing ablation in low (Odds ratio [OR] 0.27; confidence interval [CI] 0.08-0.85) and mid (OR = 0.12; CI 0.02-0.61) volume hospitals than hospitals with no volume. Results were consistent when using mean monthly volume indicator as compared to total volume indicator. **CONCLUSIONS:** Hospital volume of ThermoCool SmartTouch® Catheter use had a significant influence on LOS, supply costs, and readmission among AF patients undergoing ablation using this device.

##### PMD37

#### TITLE: MODELLING THE EFFECT OF SYPHILIS SCREENING AT THE ENTRY POINT IN CHILEAN PRISONS

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**OBJECTIVES:** To simulate the current syphilis dynamics in Chilean prisons evaluate the potential effect on syphilis transmission of entry points screening strategy using point-of-care rapid test. **METHODS:** A compartmental model was developed to characterize the transmission dynamics of syphilis inside the prison with the

ongoing strategy and the way it is affected by the entrance of new inmates over 40 year period. The model also allows to simulate the implementation of an entry point screening strategy and the treatment of the detected cases. The model includes seven compartments or disease stages: susceptible, incubation, primary, secondary, latent, and tertiary stages, and immunity period. The individuals transit from susceptible to infected depending on the transmission rate and the number of sexual partners and then continues the natural history of disease according to the duration of the different stages, the detection rate and the treatment effectiveness. The parameters used were obtained from systematic searches of indexed and grey literature and field observation. **RESULTS:** In the current situation, with no established program for the search of the infection (only upon spontaneous consultation or as an unexpected finding), less than 30% of the cases are detected and treated once in the latent stage, the prevalence of syphilis reaches about 3%. On the other hand, the implementation of an entry screening program using point-of-care rapid test, assuming 90% coverage, would reduce the prevalence to near 1%. **CONCLUSIONS:** The present study shows the potential impact of implementing an entry point screening program in the context of a high risk population with limited access to health care, such as prisoners. Considering the low cost and simple application of rapid test, a following step should be to assess the cost effectiveness of strategies based on these test in a hard to reach population.

#### PMD38

##### BARRERAS Y FACILITADORES PARA LA COBERTURA DE PERITONEODIÁLISIS EN CHILE

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**OBJECTIVES:** La peritoneodiálisis alcanza coberturas de hasta 35% de los pacientes en diálisis en algunos países, siendo en promedio 11% a nivel internacional. En Chile esta cobertura no llega al 6%. El objetivo de este estudio fue indagar en las barreras y facilitadores percibidos por usuarios, profesionales, administrativos y pagadores del sistema de salud en relación a la implementación y uso de peritoneodiálisis. **METHODS:** Estudio cualitativo mediante estudio de caso que entrevistó a usuarios, profesionales de la salud, administrativos y pagadores del sistema de salud chileno en la región metropolitana. La recolección de datos se realizó mediante entrevistas semiestructuradas, utilizando un arranque muestral de 30 participantes hasta saturar información. Se realizó análisis temático utilizando software NVIVO. **RESULTS:** La principal barrera identificada fue la falta de traspaso de información al paciente debido a: paternalismo médico; desconocimiento de la técnica e inercia del sistema; y estereotipos de los profesionales de la salud. Además, llamó la atención la percepción de riesgo de peritonitis referida por los pacientes, la larga duración del procedimiento, la alteración de las rutinas familiares, gastos no cubiertos y la dificultad del procedimiento. Burocracia administrativa no fue una barrera relevante. Incentivos de los prestadores a indicar hemodiálisis parece estar fuera de las grandes ciudades. Dentro de los facilitadores destacan: la cobertura existente; la logística ofrecida por el proveedor; mayor sensación de autonomía; permite mayor ingesta de líquido; tratamiento percibido como fisiológico y mayor flexibilidad para adaptación del paciente al entorno. **CONCLUSIONS:** La principal barrera identificada es la falta de información que llega a los pacientes. Este hallazgo revela que probablemente la forma más eficiente de ampliar la cobertura de peritoneodiálisis es a través de la implementación de instrumentos normativos que garanticen que la información llega a los pacientes, y que éstos puedan ser parte de un proceso de toma de decisión compartida.

#### PMD39

##### MEJORAMIENTO DE LOS RESULTADOS CLÍNICOS EN PACIENTES CON REEMPLAZOS DE CADERA Y RODILLA

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**OBJECTIVES:** Implementar una iniciativa para mejorar los resultados clínicos de los pacientes que requieren un reemplazo articular primario de cadera y rodilla haciéndolos comparables con los de la literatura. **METHODS:** Fue realizada una revisión de la literatura sobre los resultados clínicos de los pacientes que requieren un reemplazo articular primario de cadera y rodilla. Fue implementada la metodología de Centros de Cuidado Clínico de la Joint Commission International (JCI). La iniciativa se desarrolló durante 18 meses de atención a partir de septiembre del 2014, iniciando con un diagnóstico del nivel de desarrollo de la institución frente a los estándares de la JCI, posteriormente acompañando el mejoramiento en tres ejes: la estandarización de procesos con un enfoque centrado en el paciente y su familia y la gestión del riesgo, indicadores de resultado clínico con base a los establecidos en la literatura y el mejoramiento de la experiencia del paciente, haciendo énfasis en la educación del paciente y sus familia durante todo el ciclo de atención. **RESULTS:** La tasas de complicaciones por Infección Asociada al Sitio Operatorio y complicaciones de embolia vascular profunda redujeron de 2.3% a 0.52% y de 1.5% a 0.1%, respectivamente. Fue observado un aumento en casi 100% de acceso (757 procedimientos en 2014 y 1223 en 2016) a pacientes y sus familias a un modelo innovador de atención, impactando de forma positiva su calidad de vida y la experiencia del paciente y su familia. **CONCLUSIONS:** La iniciativa de mejoramiento de los resultados clínicos en pacientes con Reemplazos de Cadera y Rodilla permitió una mejora en la curva de aprendizaje de los equipos de cuidado de esta condición específica y consecuentemente en los resultados clínicos, impactando los costos de la atención y contribuyendo a la sostenibilidad del sistema de salud colombiano.

#### PMD40

##### SYSTEMATIC REVIEW ON CLINICAL OUTCOMES OF ULTRASONIC TECHNOLOGY FOR PATIENTS UNDERGOING GYN ONCOLOGY PROCEDURES

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**OBJECTIVES:** This study aims to describe the clinical advantages of using ultrasonic technology versus conventional electrosurgery in GYN oncology procedures to reduce perioperative and postoperative complications in surgical staging, including lymphadenectomy. **METHODS:** An Ovid Embase/Medline, Scopus and PubMed search were conducted using keywords such as harmonic, ultrasonic, ultracision, scalpel, shears, scissor and dissector in procedures including but not limited to gynecologic surgery, genital diseases/neoplasms (female), hysterectomy, myomectomy, adenoma, cervix, carcinoma, neoplasm, tumor and malignancy. Results were limited to publications of human subject studies in English from January 2006 to October 2016. Studies comparing ultrasonic technology to conventional electrosurgery for GYN oncology were selected. All abstracts were filtered, including meta-analysis, RCTs, retrospective observational studies. Case studies and review articles were excluded. **RESULTS:** Four studies (one prospective and three retrospective cohort reviews) were identified from France, Italy, Czech Republic and Qatar for para-aortic lymphadenectomy or surgical staging as part of concomitant laparoscopic procedures (hysterectomy, pelvic lymphadenectomy, omentectomy, ovary transposition) and radical vulvectomy with inguinal lymphadenectomy. All studies describing ultrasonic technology demonstrate significant benefits over conventional techniques in gynecologic oncology surgery: Intra-operative peritoneal leakages are reduced by 76% (from 14% to 3%, p=0.004), blood loss during surgery is reduced up to 54% (from 75.4 cm3 to 34.7 cm3, p=0.01), operative time for tissue excision is up to 18% less (from 142 min to 117 min, p<0.05), at most 32% additional lymph nodes are harvested (from 13.7 to 18.1, p<0.001) and up to a 100% reduction in lymphocele leaks post-operative that require treatment (from 7 to 0, p=0.03). **CONCLUSIONS:** Although a limited number of clinical studies evaluating ultrasonic technology for GYN oncology exist, current studies show that ultrasonic technology demonstrates significant patient benefits compared to conventional electrosurgery techniques. Benefits, however, need to be confirmed in prospective randomized trials.

#### PMD41

##### EFFECTIVENESS OF THE PERIPHERALLY INSERTED CENTRAL VENOUS CATHETER IN ADULT AND PEDIATRIC PATIENTS

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**OBJECTIVES:** This study aims to assess whether the use of the peripherally inserted central venous catheters (PICC) is more effective than the peripheral catheters and the centrally inserted central catheters to short permanence in adult and pediatric patients, for intravenous therapy greater than 14 days. **METHODS:** The PICO tool was used: adult and pediatric patients (population); PICC (intervention); other short permanence catheters, either central or peripheral (comparator); local and systemic infection, length of use of the device, risks related to catheter placement and maintenance, costs and work process (outcomes). Nine electronic databases were searched (including PUBMED, Cochrane, Embase and Bireme) and manual search. The screening of studies, quality assessment, extraction and analysis were performed by two independent researchers. **RESULTS:** 935 studies were identified, and after the selection, seven were included: three systematic reviews (two with meta-analysis), three randomized controlled trials and one cohort study. Most studies were published in 2013 (71,4%) and made in the USA (57,1%). Five studies compared the PICC to central venous catheter and two studies compared the PICC to peripheral venous catheter. The most analyzed outcomes were thrombosis and local and systemic infections by five studies. The PICC had longer permanence and lower healthcare demand compared to other catheters. Only one study showed significant difference in systemic infection. There was no significant difference in local infection. The main risk related to the maintenance of the PICC is venous thrombosis with a significant difference in three of the five analyzed studies. About catheter placement, only the risk of malposition was higher. **CONCLUSIONS:** The PICC has specific indications that differ from those of short permanence peripheral or central catheters, being a more effective option for adult and pediatric patients who require intravenous therapy longer than 14 days, continuous or intermittent, in hospitals, outpatient and home care.

#### PMD42

##### EFFECTIVENESS OF SURGICAL STABILIZATION OF RIB FRACTURES WITH OR WITHOUT FLAIL CHEST – A SYSTEMATIC REVIEW

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**OBJECTIVES:** Commonly, multiple rib fractures with or without flail chest are treated conservatively and are frequently associated with multiple complications. To reduce the complications and cost to treat the patients the surgical stabilization of multiple rib fractures are indicated. The aim of this study is to systematic review, the efficacy of the surgical stabilization of multiple rib fractures. **METHODS:** Pubmed and Scopus database were reviewed until March, 2017. The search was limited to English studies published in the past 5 years. Meta-analysis (MTA), Systematic Reviews (SR) and Randomized Clinical Trials (RCT) were included. **RESULTS:** 80 records were identified. 12 studies were reevaluated. 5 studies met the inclusion criteria. One MTA and one SR evaluated three RCTs with 123 patients (flail chest). There was a positive significant difference for the surgical group in deformity, chronic pain, pneumonia, tracheostomy, ventilator time, ICU stay, and hospital stay. The second SR evaluated 9 studies (without flail chest). There was a positive result for surgical stabilization in fast reduction in pain and disability, pain and patient recovery, pain, respiratory function and quality of life. The first RCT evaluated 20 patients (flail chest). There was a positive significant difference for the surgical group in shorter ventilator time and hospital stay. The second RCT evaluated 46 patients (flail chest). There was positive significant difference for the surgical group in ICU stay and lesser